

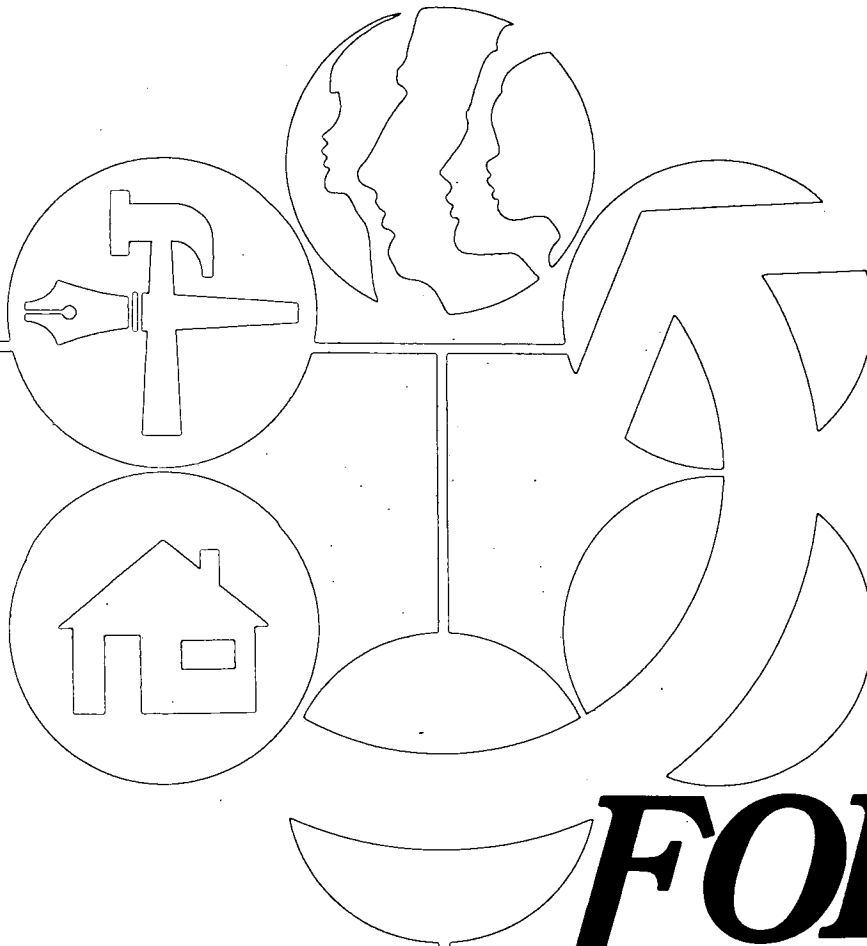
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third  
annual  
**GROWTH  
POLICY**

report  
of  
the

MONTGOMERY  
COUNTY  
PLANNING  
BOARD

october  
1976



# FORECAST

PEOPLE  
JOBS  
& HOUSING

**October 1976**

# FORECAST

**Third Annual Growth Policy Report for** People  
Jobs  
&  
Housing

**Published by**  
**The Maryland-National Capital Park & Planning Commission**



**TITLE:** FORECAST OF PEOPLE, JOBS AND HOUSING, in Montgomery County, Third Annual Growth Policy Report of the Montgomery County Planning Board

**AUTHOR:** The Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission

**SUBJECT:** Implications of declining rates of growth in Population, Dwelling Units, and Employment: 1976-1986

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**ABSTRACT:** This document provides a forecast and analysis of anticipated population, dwelling units and employment trends in Montgomery County over the next ten years. National and regional projections are analyzed to identify future patterns of change which may influence growth in the County.

The Maryland-National Capital Park and Planning Commission is a bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties: The Metropolitan District (for parks) comprises 919 square miles in the two counties, while the Regional District (for planning) includes 1,001 square miles.

The Commission has three major functions: (1) the preparation, adoption, and from time to time, amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District; (2) the acquisition, development, operation, and maintenance of a public park system in the Maryland-Washington Metropolitan District; and (3) in Prince George's County, the operation of the entire County public recreation program.

The Commission operates in each County through a Planning Board, appointed by and responsible to the County Council. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

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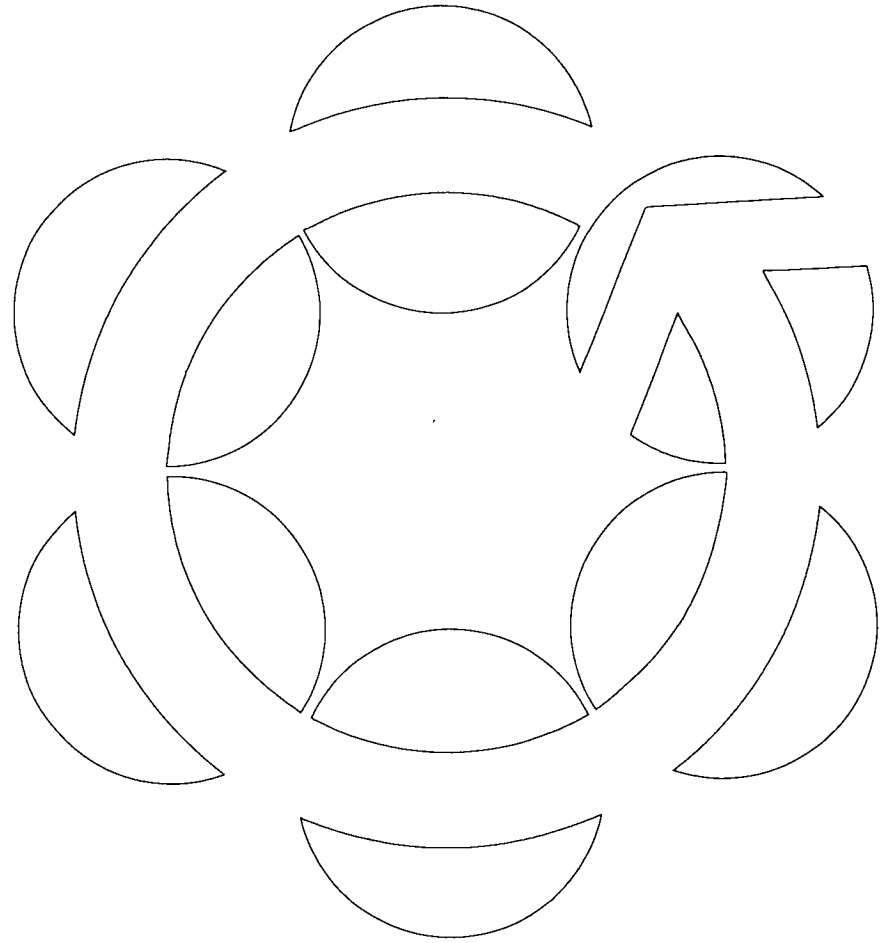
## PREFACE

This is the third in a series of annual growth policy reports. These reports are intended to help focus an evolving perspective of the growth management process in the County, and to assist in the guidance and coordination of the many on-going activities that together constitute that process over the year.

The first report, called "Framework for Action," laid out a basic conceptual model of the process, a description of the issues to be dealt with, a general policy approach to these issues, and some specific strategy recommendations.

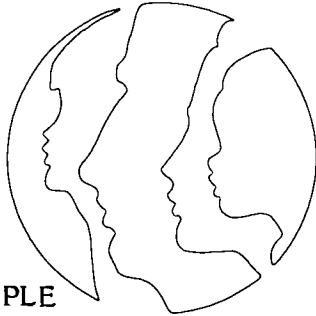
The second report, called "Fiscal Impact Analysis," tested the fiscal implications of alternate future rates and growth; and further developed the concept of how to use fiscal impact analysis and other measures, such as levels of public service, so as to provide a computerized analytic tool that can be used to test a wide variety of possible growth options. Also included in the second package was "Sequel No. 1 Environment and Transportation" report. This sequel report dealt with the policy implications of the fiscal impact analysis in those two functional areas, and recommended certain specific action strategies for further testing and implementation. The first was a technical document. The second was a policy document.

The third report, called "Forecast--People, Housing & Jobs," is similar to last year's report in the sense that it is a technical report, which is to be followed by a Sequel Report outlining the strategic policy implications that logically flow from the analysis of this first report. Because of some recent controversies that have arisen locally in connection with growth forecasting, it seems increasingly important for the members of County government, as well as the general public, to understand the assumptions and uncertainties that must be reckoned with in developing forecasts. This document attempts to make explicit both the methodology and results of the Board's most recent effort to accurately forecast the likely course of future growth, as a prelude to a more informed public dialogue about how to deal with the contingencies of this future.



***Highlights***  
***at a***  
***Glance***

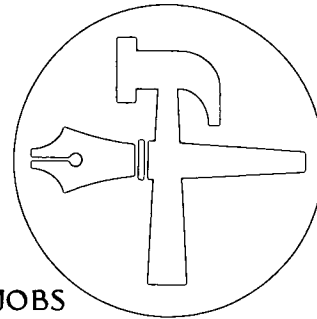
## MONTGOMERY COUNTY GROWTH FORECAST



### PEOPLE

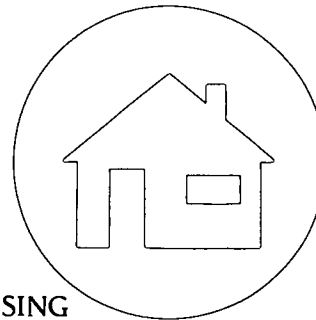
Utilizing the most recent information concerning national, regional, and local trends the Montgomery County Planning Board forecasts a population increase of less than 100,000 by 1986, considerably less than in previous decades. Forecasts beyond 1986 are more uncertain because assumptions underlying the estimates may not fully account for changes in economic and social conditions or future policy considerations. They represent anticipated growth patterns based on trends or events presently visible, frequently adjusted by policy and other constraints (Master Plans, zoning, etc.).

Within the ten-year period population growth can be expected to vary significantly around the average annual rate due to the cyclical nature of the construction industry. We are more certain of the growth which will occur during the first five years than the second, since forces expected to trigger growth through 1981 are more apparent. During the next five years total population is expected to grow on an average annual rate of 5,800. In the following five years, the average annual increase is expected to reach 13,500 as the number of household formations increases both at the national and local levels, job related regional immigration picks up, and the local sewer problem is solved. Also by 1980 the residential construction cycle is expected to be in an upswing.



### JOB

Montgomery County is expected to maintain its place as a major employment center, second only to the District of Columbia in the Washington area. Throughout the forecast period the County will exhibit characteristics normally associated with central cities. For example, the percentage of residents working within the County will increase while at the same time the number of in-commuters will accelerate. Jobs will grow faster than either population or households. There will be more adults relative to children and more women working, thus more job holders in the population.



### HOUSING

Household growth will significantly outpace population growth during the next 20 years. While this is a continuation of a basic long-term trend, the pace of household growth over population growth has, since 1960, taken a sharper upward movement both here and nationally. The higher rate of household growth over population growth is resulting in a dramatic decline in average household size as young persons leave home for college, marriage, and to otherwise form new households.

800 THOUSANDS

600

400

200

0

1960

1970

1976

1981

1986

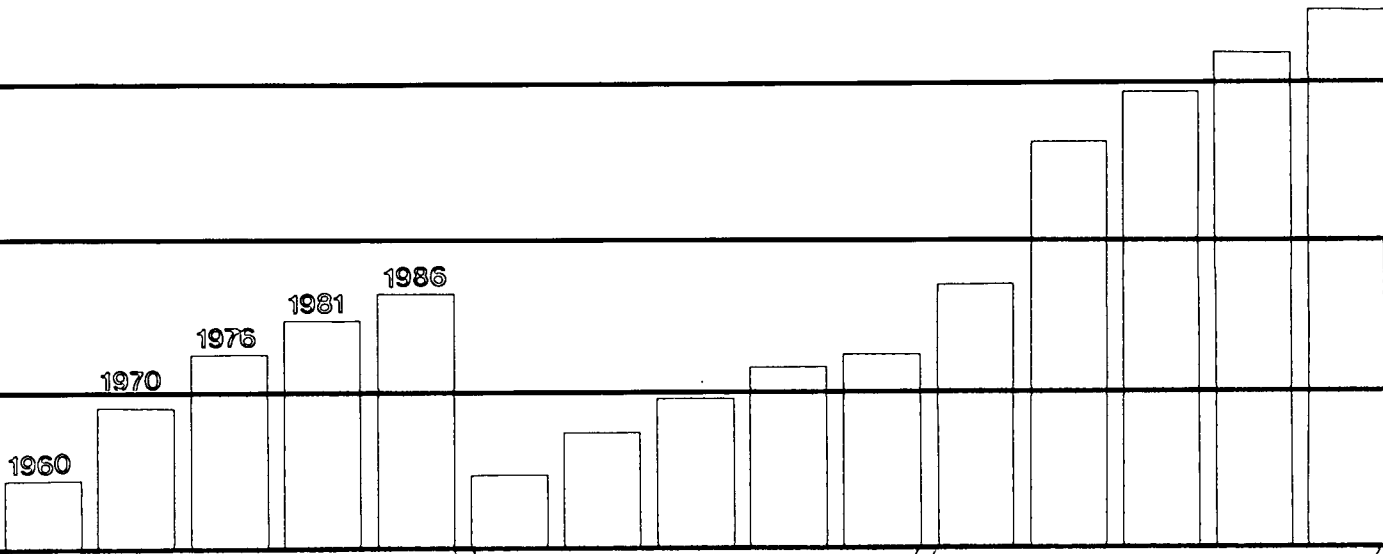
MONTGOMERY  
COUNTY  
POPULATION  
HOUSEHOLDS  
AND  
AT-PLACE EMPLOYMENT

EMPLOYMENT

HOUSEHOLDS

POPULATION

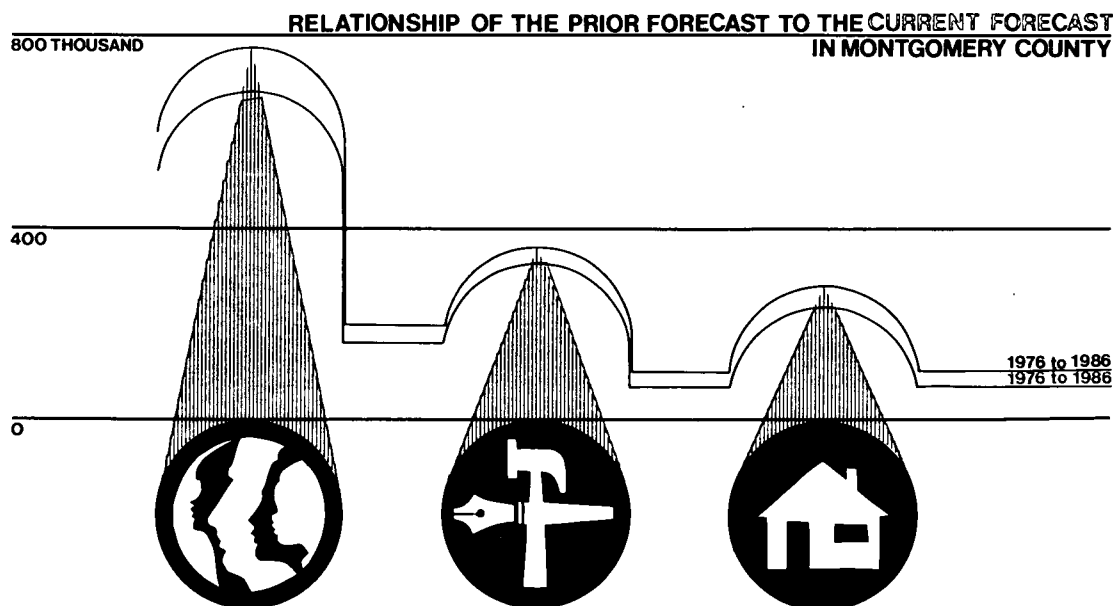
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### COMPARISON TO PRIOR FORECAST

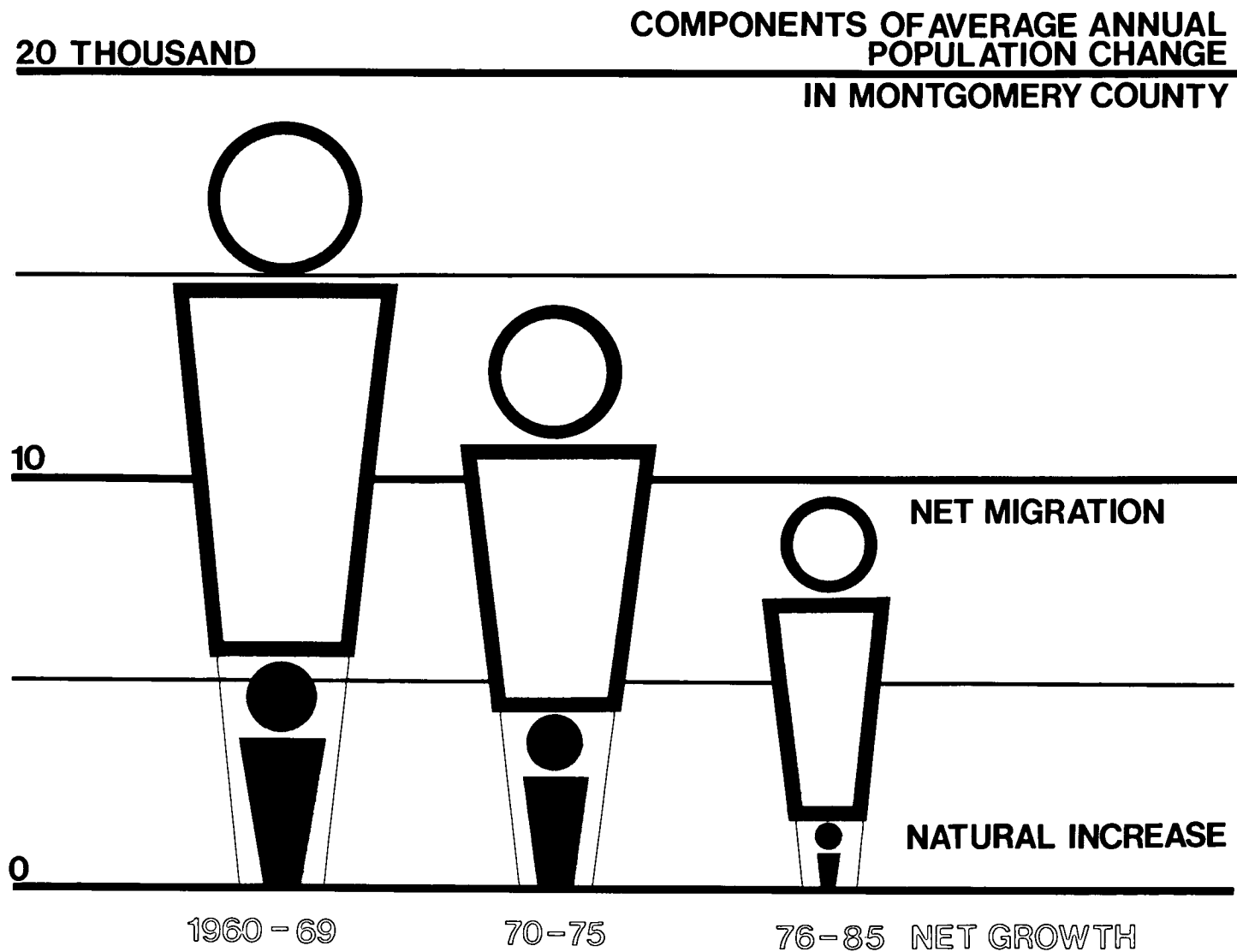
This year's Growth Forecast has the benefit of the results of updated national, regional and local demographic and economic trends made by the Bureau of the Census and COG. Compared to the prior COG forecast the current forecast anticipates less growth over the next ten-year time frame. The dramatic drop in birth rates, regional in-migration and average household size since 1970 could not have been fully predicted and incorporated in the earlier forecasts.

Of the three elements of the Forecast--population, households and at-place employment, the population figures have the largest numerical decline in forecast growth followed by households and employment. The lowered projected employment, both local and regional, suggests a lowering of in-migration. Since in-migrants historically have had higher household sizes, their reduced numbers will accentuate the local trend of declining family size.



## NATURAL INCREASE VS. NET MIGRATION

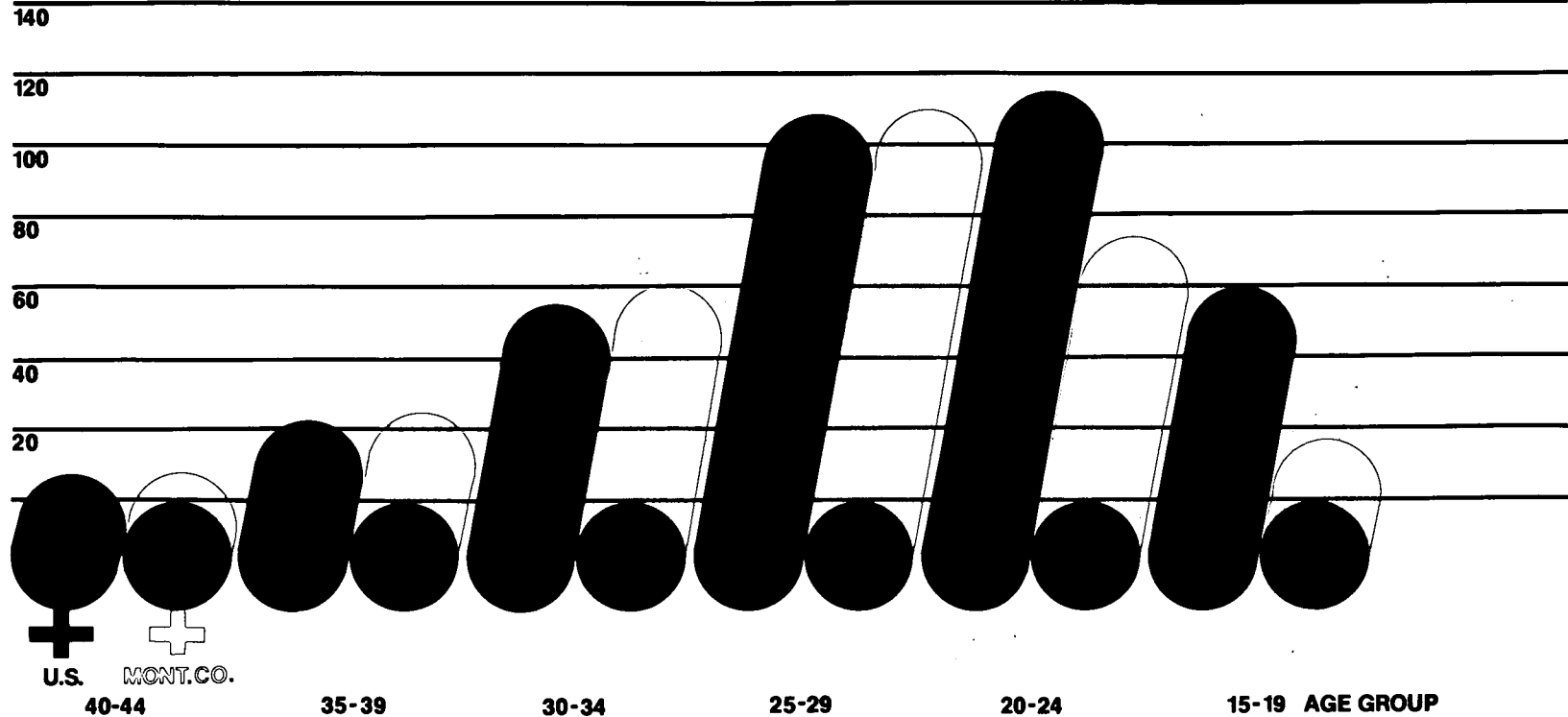
For the Forecast period, both of the major components of population growth, natural increase and net migration, will decline relative to past experience.



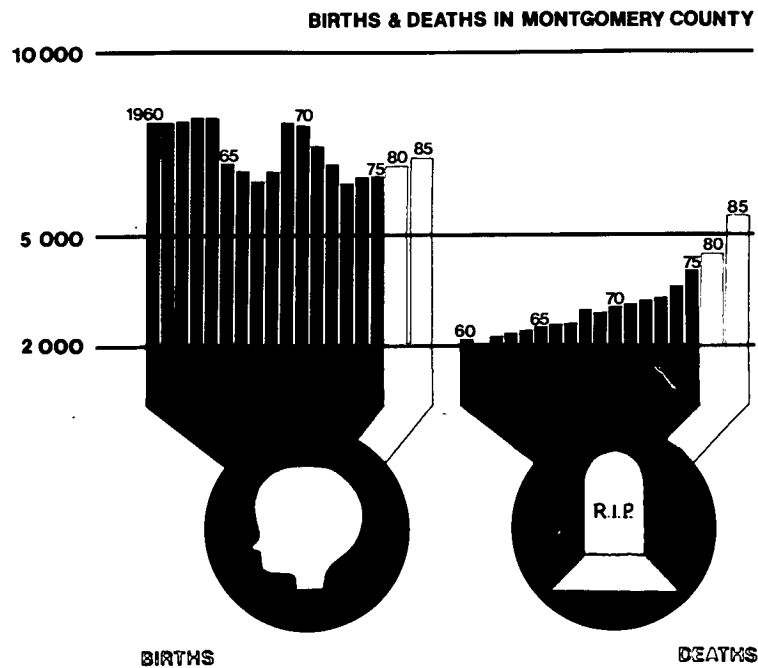
Due to high levels of educational attainment and life-style preferences, women in Montgomery County differ from national fertility trends by having fewer children, and by delaying child bearing. Although the number of women in the childbearing ages has increased significantly, births are currently averaging 2,000 less per year than in the late 1960's. At the same time the number of deaths continues to increase as the population ages. Since future rates of natural increase are expected to be at a very low level in Montgomery County, significant population growth can only occur through net in-migration.

Net migration over the next ten years will account for

**BIRTHS PER 1000 WOMAN - 1974**



over 80 percent of total population growth. In-migration to the region is largely a function of jobs, but recent studies indicate that close proximity to work is very often of lower importance in choosing a residence than preference for housing type, price, and neighborhood characteristics. As Montgomery County matures, its importance as a job center is growing at the same time that its supply of close-in land decreases and the price of its housing accelerates. Most of the land which is attractive for middle-priced development in Montgomery County is located in the I-270 Corridor. This area must compete with locations in other counties of the region in addition to such "rural" areas as Frederick and Howard Counties. In-migration to Montgomery County is expected to stay below earlier rates as long as regional growth remains at levels below the 1960's.

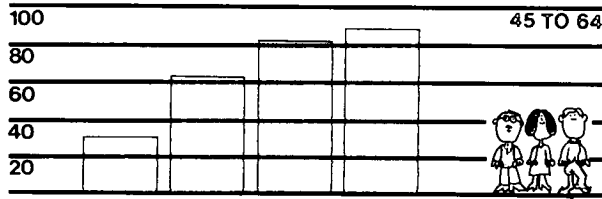
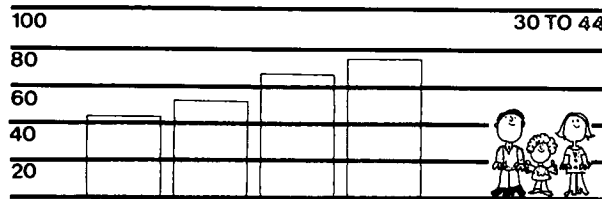
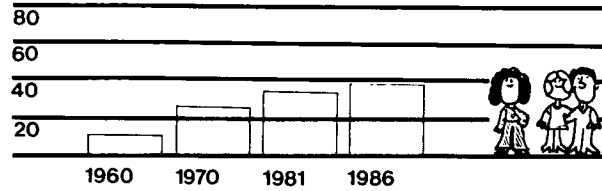




# HOUSEHOLD HEADS BY AGE

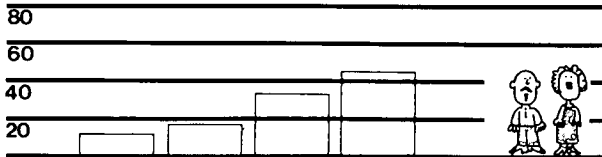
100 THOUSAND

UNDER 30



100 THOUSAND

OVER 65



IN MONTGOMERY COUNTY

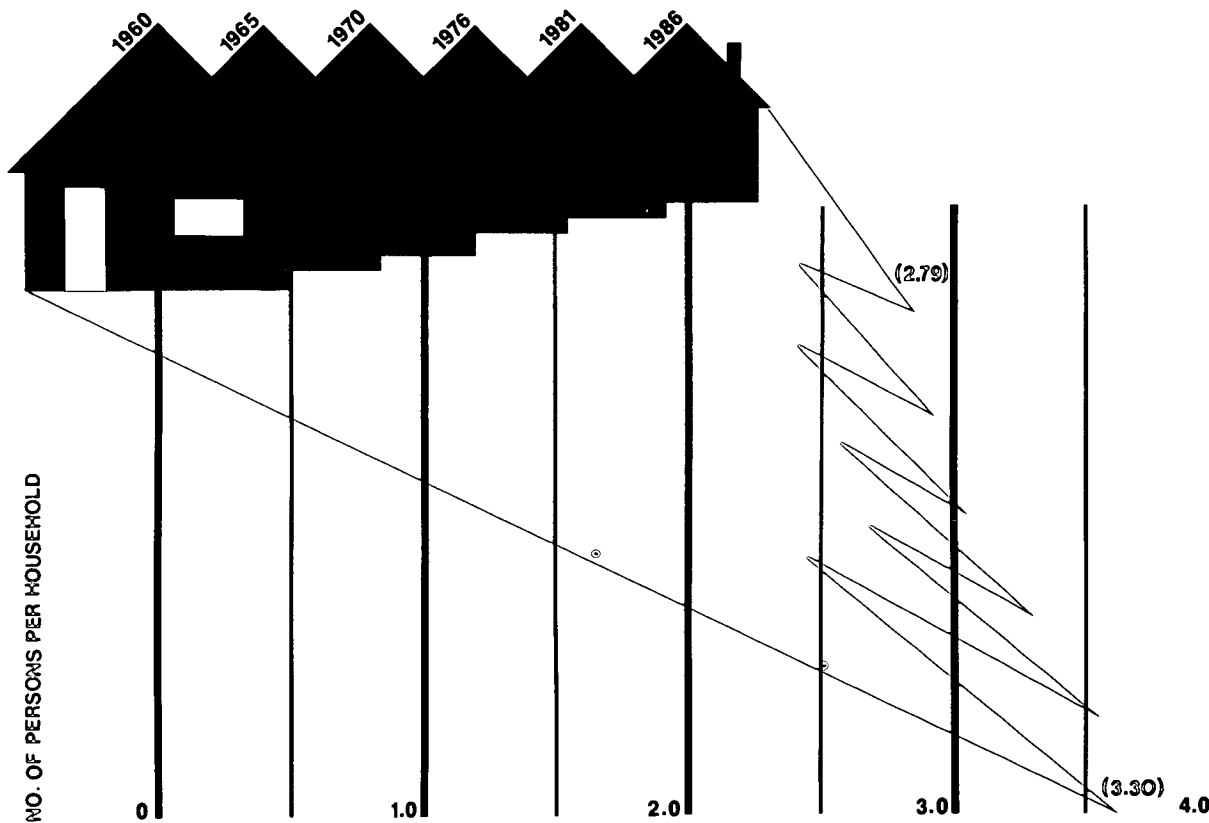
## CHANGE IN HOUSEHOLD CHARACTERISTICS

Distribution of Household Heads by Age - During the next ten years the age distribution of household heads is expected to become more balanced relative to earlier periods. Individuals born during the 1945-1958 "baby boom" are already adults and by 1986 will be in the 30-44 age group. Beginning in the mid 1960's large numbers of this group began to form households. The 1960-1976 percentage increase in young adults will not be duplicated during the Forecast period. Many young adults live in apartments, and it was this group that provided the market for an acceleration in apartment construction which only began to moderate in the early 1970's. Those at the forefront of this age group are now entering their early 30's and, if historic trends persist, will switch their housing preference to single-family homes and townhouses. While creating a demand for "starter" single-family homes, their movement from apartments should lessen the problem of supplying moderate cost apartments to the remaining group of young people born up to 1958 when the "baby boom" began to shift into the "baby bust."

At the other end of the age spectrum, the number of elderly heads of households will increase dramatically. The size of this group is expected to increase well beyond the ten-year forecast period, unless offset by mass movements out of the area to the Sun Belt or other areas. Since most elderly households include only one or two persons, the growing size of this group will contribute to the falling average household size phenomenon.

## AVERAGE HOUSEHOLD SIZE

Average household size has undergone a steep decline. The number of persons per household is projected to decline from 3.02 to 2.79 over this period. This trend is accentuated when young adults leave home, divorce rates and unmarried households increase, and the birth rate continues to decline. Over the next five years an annual population equivalent of over 2,000 occupied homes is required to offset declines in the average household size in the existing housing stock.

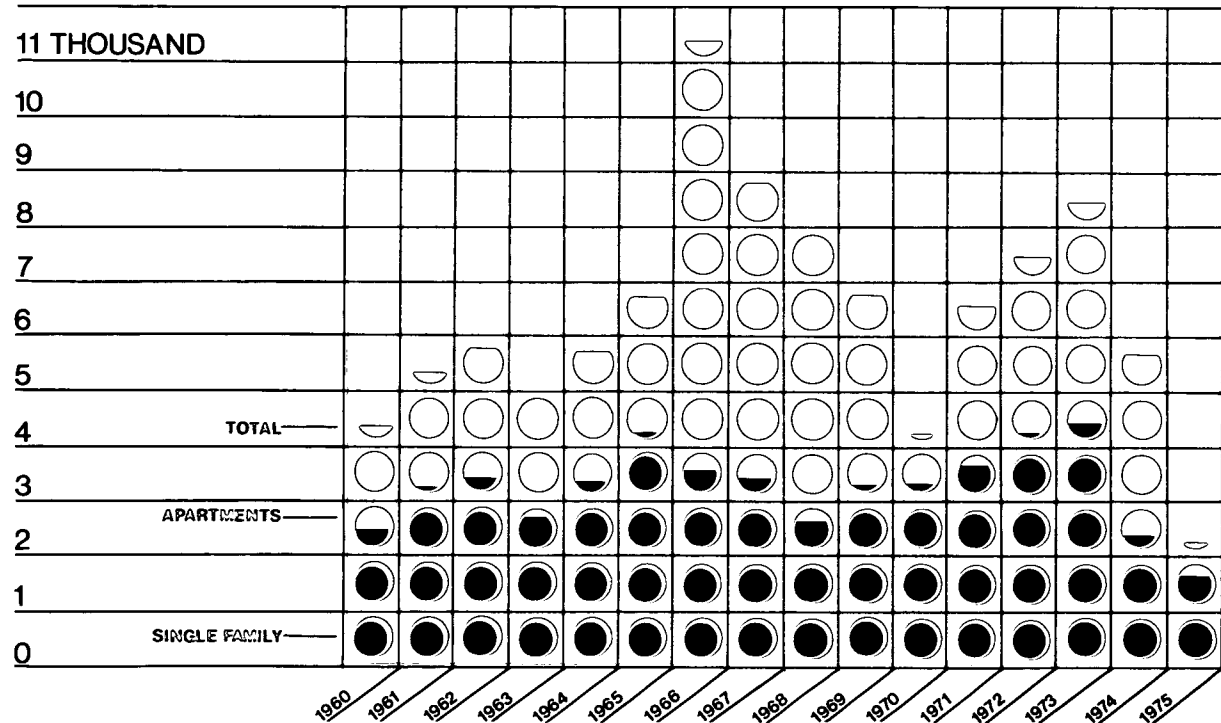


**CHANGES IN AVERAGE HOUSEHOLD SIZE  
MONTGOMERY COUNTY**

## CHANGE IN THE LOCATION AND TYPE OF RESIDENTIAL GROWTH

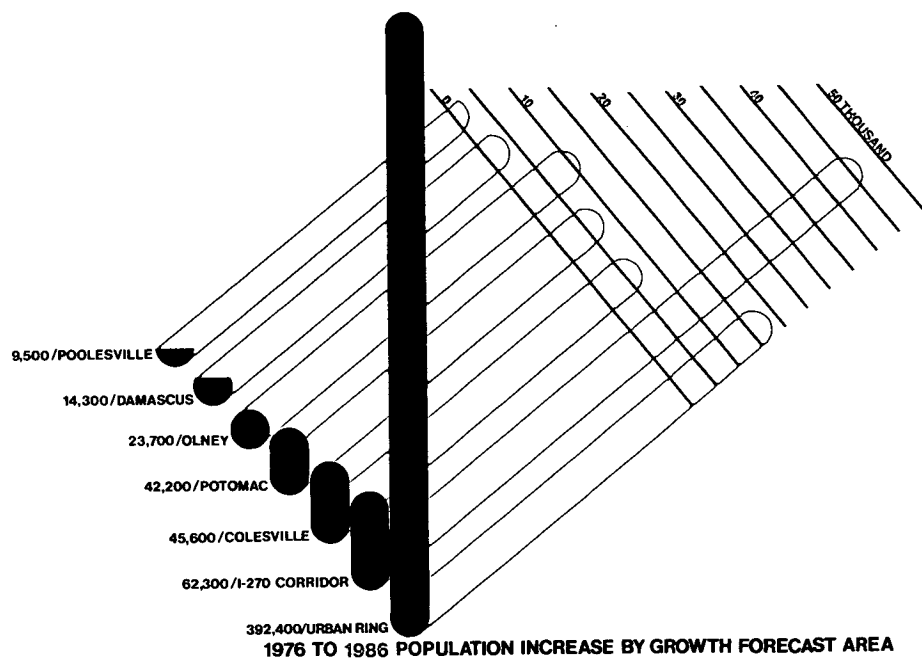
Construction cycle - The housing market is by nature extremely cyclical both at the national and local levels. During the past 15 years housing unit completions in Montgomery County have ranged from a high of over 10,000 in 1965 to a low of just over 2,100 in 1975. During this period most of the annual variation in structure type was accounted for by changes in the rate of apartment construction, whereas single-family completions remained relatively stable. The highs and lows for total construction are primarily caused by national economic conditions such as availability of mortgage money, interest rates, employment levels, and inflation.

**HOUSING UNIT COMPLETION IN MONTGOMERY COUNTY**

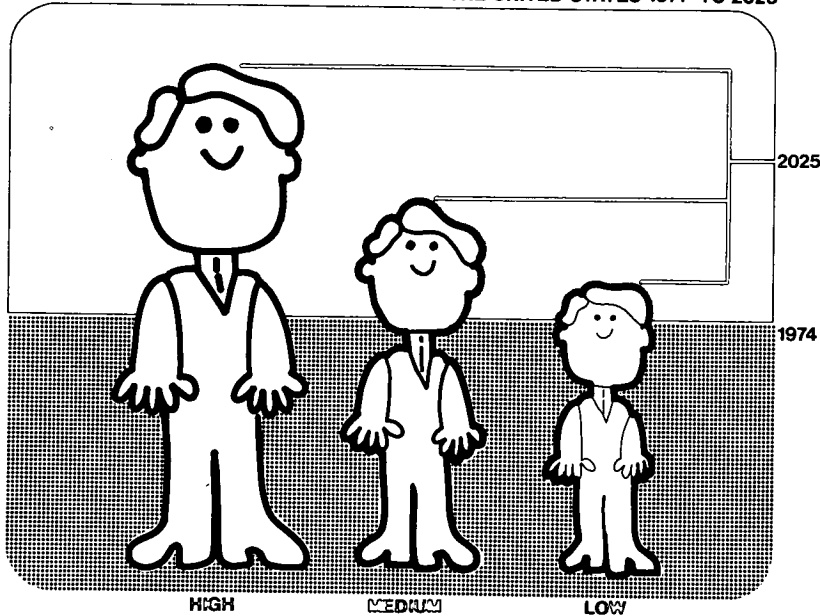


## LOCATION PATTERN

During the 1976-1981 period both market and sewer moratorium conditions will favor single-family construction and growth in the I-270 Corridor. The Urban Ring will receive the second largest share of housing growth, but a large part of this will occur in the Rossmoor retirement community. In the Urban Ring the population expected from new units will not be sufficient to offset population losses due to declining average household size. During the second five-year period, it was assumed that the sewer moratoria would be fully lifted and the market supply constraints which now make apartment construction largely infeasible should relax. These changes, along with the opening of Metro, are expected to shift a larger percentage of growth to the Urban Ring.



PROJECTIONS OF THE POPULATION OF THE UNITED STATES 1974 TO 2025



NATIONAL AND REGIONAL PROJECTIONS AND THE MONTGOMERY COUNTY FORECAST

PROJECTIONS OF THE POPULATION OF THE UNITED STATES: 1940-2025

Historically, the impact of national trends in areas such as economic growth (prosperity or recession), "baby booms" and "baby busts," housing construction, household formations, etc., have influenced growth in the Washington region and Montgomery County. It is, therefore, logical to examine national projections as an indicator of forthcoming changes in the area.

The Bureau of the Census estimate of the U.S. population and households indicates that in the U.S.

- population now has reached 215 million;
- population is increasing at a lower annual rate of 0.7 percent compared to 1.7 percent during the 1950's -- the "baby boom;"
- households number 72 million and are increasing at an average annual rate somewhat higher than during past periods in contrast to slower population increases.

Utilizing common assumptions of net migration and mortality rates but applying three different fertility rates (average number of lifetime births per woman) the Census Bureau projects that by the year 2025

- in the high projection, the population will increase to 382 million. This is well above

the current annual growth rate but is below the rate experienced in the 1950's;

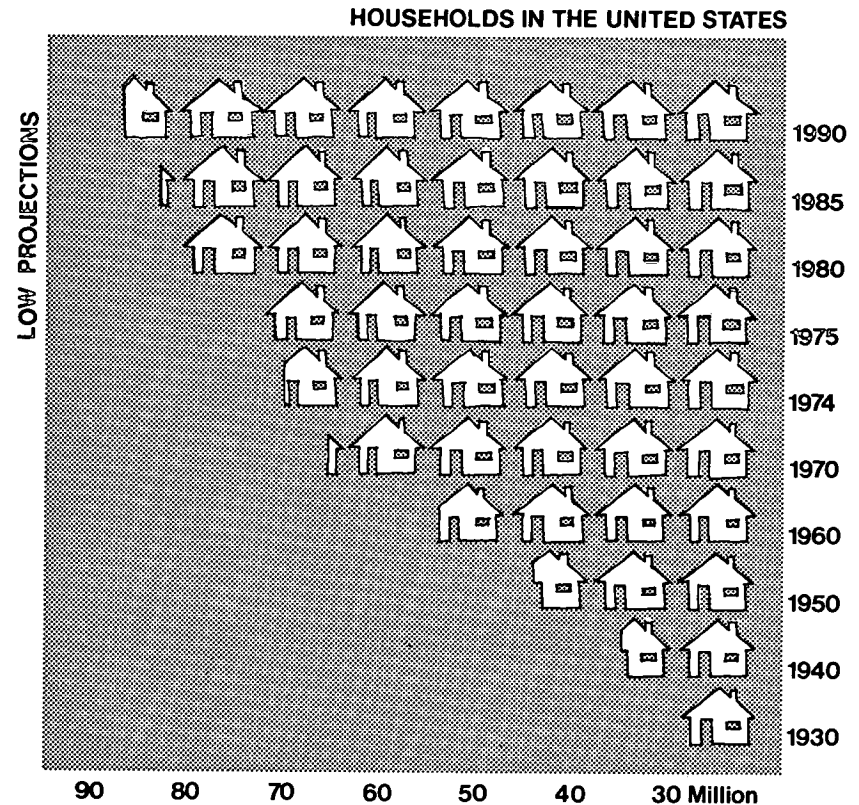
- in the low projection, the population will increase to over 250 million people. Annual increases through 1995 are equal to or slightly lower than are now occurring in the 1970's but decline to below zero by 2020;
- in the intermediate projection series, the population will increase to 300 million. This projection indicates that in the long run population growth would approach, but never reach, zero increase.

In addition to the significant differences in the size of the population among these three projections, the principal impact will be on the size of the "younger" population. Obviously there will be many more "younger" people under the high forecast than in the low.

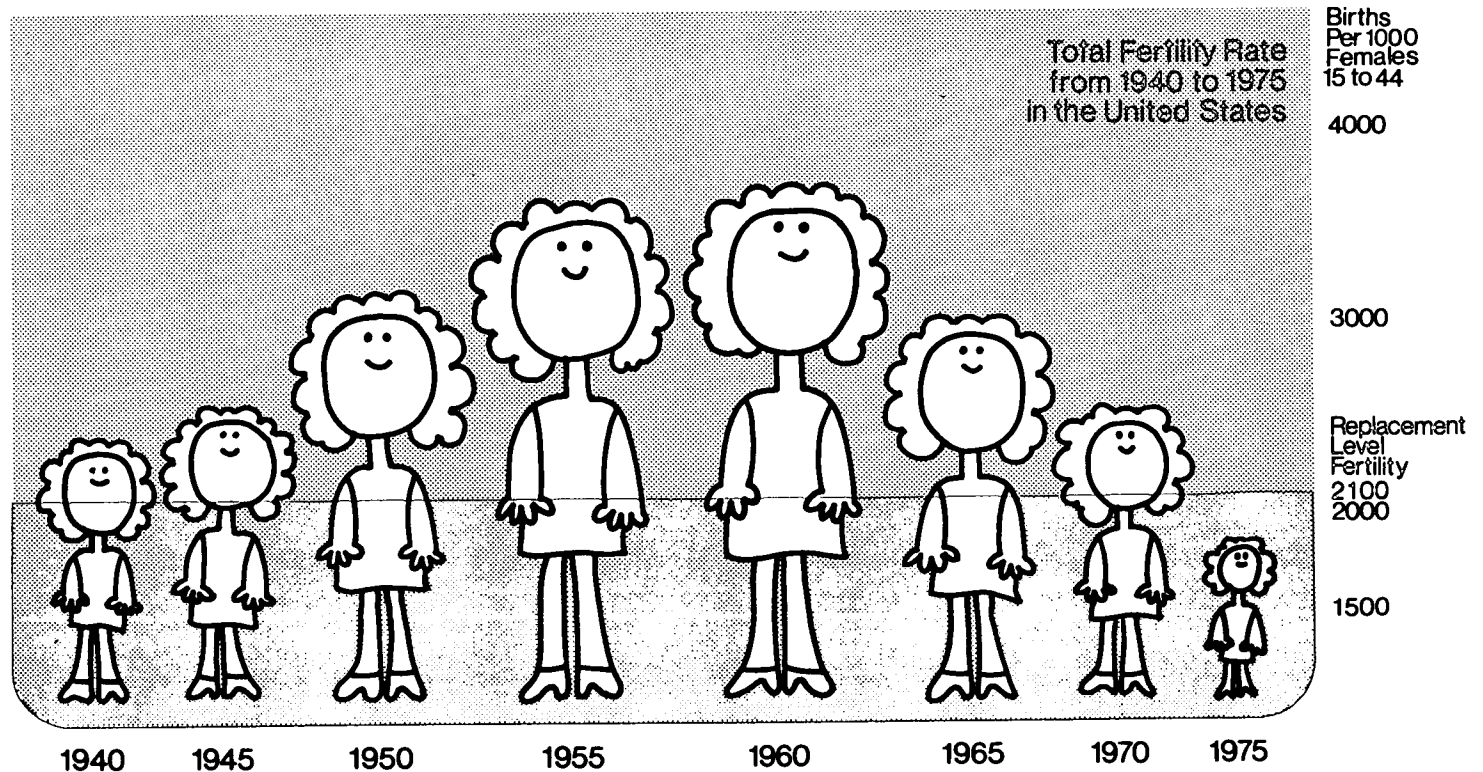
Census Bureau projections indicate that the number of households will grow at a faster rate than the overall population due largely to the increasing number of young adults coming of age who are expected to establish their own households.

According to the low Census estimates, by 1990 households are projected to

- increase by 26 percent and reach a total of over 90 million;
- increase annually by 1.5 million to 1980;
- increase at a slower annual rate after 1985, to 1.1 million per year in 1990.

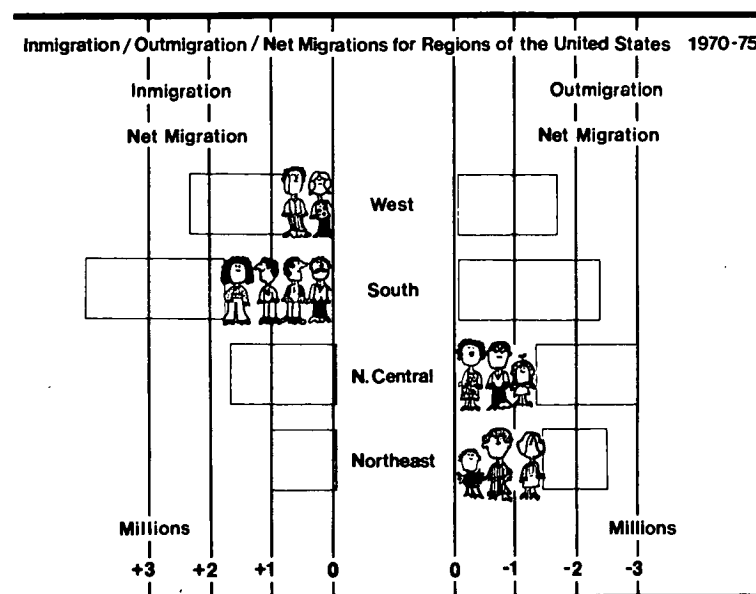


Although it is extremely difficult to anticipate which of the forecasts, if any, will likely occur, current information now being monitored on population dynamics indicates that the low forecast appears to be most consistent with recent trends. Birth rates have continued to lag behind earlier periods and worldwide experience suggests that this phenomenon is not unique to the U.S. Therefore, regional forecasts prepared by the Metropolitan Washington Council of Governments and the local forecasts prepared by the Montgomery County Planning Board are now based on the low Census estimates. As population changes occur in the future, new evidence may indicate increased rates of growth over the low estimate.

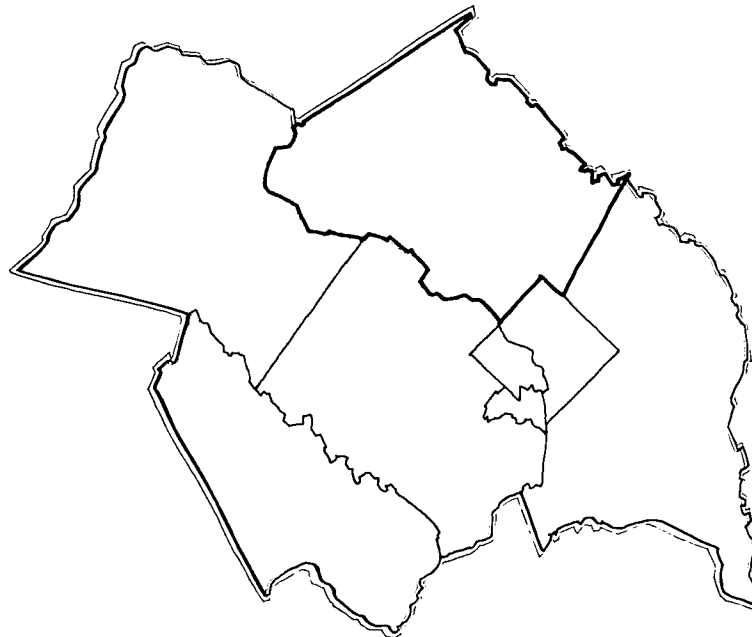


In addition to natural increase, population changes arise from the movement of people from one area to another (migration). The pattern of regional migration over the last five years as reported by the Bureau of the Census is very similar to the pattern established in the 1965-1970 period with the South and West receiving more people than were departing (net in-migration) and the more mature areas of the Northeast and North Central States receiving fewer people than were leaving (net out-migration).

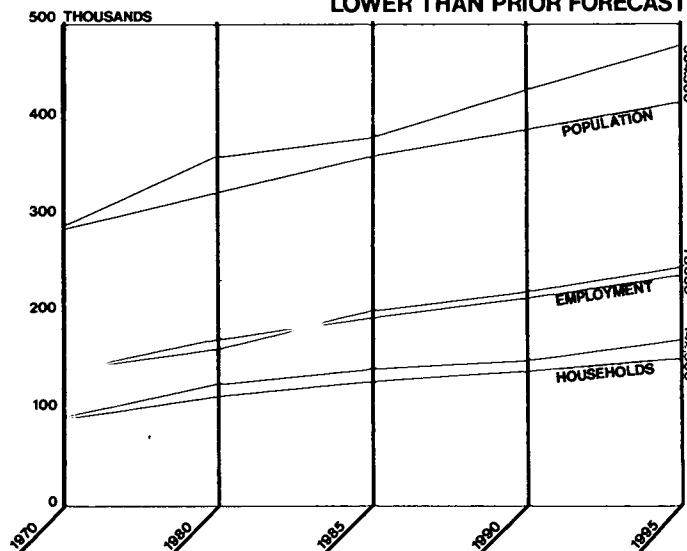
The Washington Metropolitan Area is somewhat unique because of the concentration of Federal activities and related industries which have served as a magnet for people. However, many of the influences operating to the disadvantage of the North Central and Northeast States (concentrations in slow growth industry, environmental and social problems, high taxes, etc.) are occurring in the Washington area (e.g. slowing of Federal growth). These probably will dampen the expansion of the area's population by reducing the number of people moving into the area. In fact, the Census Bureau estimated that there was a net out-migration from the Washington Metropolitan Area, between 1970 and 1974 of 13,500 people, thus reversing the long-term trends of recent decades when the area had substantial numbers of in-migrants.







**METROPOLITAN AREA GROWTH  
LOWER THAN PRIOR FORECAST**



## WASHINGTON METROPOLITAN AREA (COG COOPERATIVE FORECAST)

In recognition of the national trend towards slower growth the Metropolitan Washington Council of Governments (COG) in cooperation with the member jurisdictions has released a new forecast of future population, households and employment in the Washington area. This latest forecast shows that the growth rate anticipated in their 1972 projections probably will not be realized.

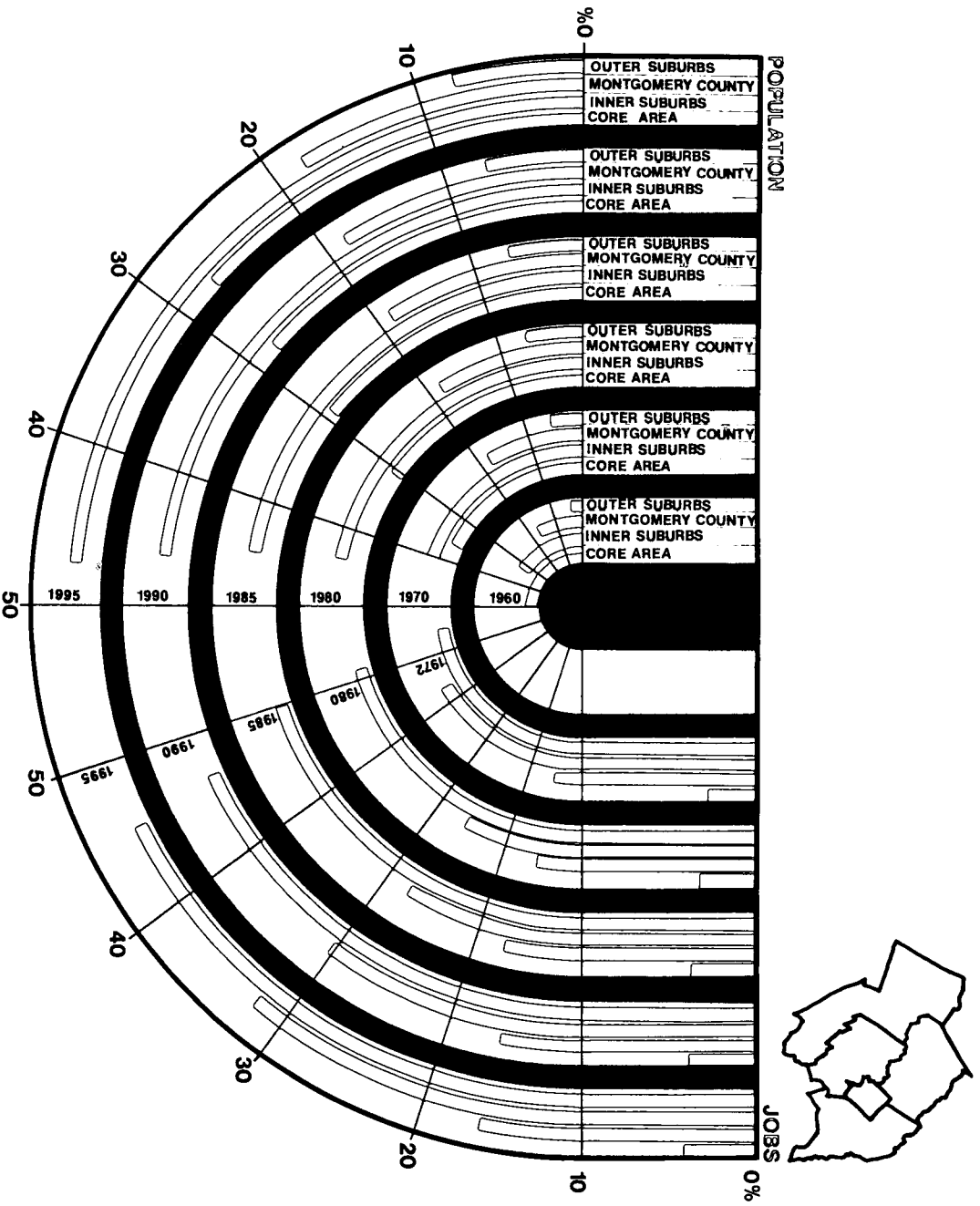
The forecast anticipates that by 1995 the regional population will increase by 1.4 million people to reach a total of over 4 million. This increase is significantly higher than the U.S. projection of population growth through the year 2000. On the other hand, it is more than ½ million below their forecast of 1972.

The massive growth in area population which occurred in the 1960's is not expected to be repeated in any one of the future decades.

Household formations are anticipated to grow faster than population in the metropolitan area over the 1970-1995 period. The forecast households in 1995 represents a 73 percent increase over 1970, compared to a 48 percent population increase. With the number of households in the region increasing more rapidly than population, the average household size will continue to decline gradually.

The number of at-place jobs in the area is expected to increase rapidly over the forecast period. With the size of the working age population growing and fewer youngsters at home to inhibit the entry of women into the job market, an increase in the percentage of workers to total population is forecasted.

# **JURISDICTIONAL CHANGES** Forecasts for Montgomery County were submitted to COG by the Montgomery County Planning Board. Two



SHARE OF REGIONAL POPULATION & AT-PLACE JOBS BY JURISDICTION / WASHINGTON SMSA

sets of forecasts were submitted for 1980 and 1985 -- a low or intermediate projection and a high or trend projection. If using only one set of forecasts, for testing purposes, COG was instructed to use the lower forecast as more representative of recent trends in Montgomery County.

Countywide control totals for 1980 were developed primarily from data on developments already in the pipeline and known plans for construction. Control totals for 1980 and also 1985 were developed on the basis of demographic analysis, including cohort-survival techniques for aging the existing population, and net migration assumptions. The high forecasts are generally consistent with construction trends over the past ten-year period while the low forecasts are more consistent with construction rates of the more current 1974, 1975 period when lower levels of housing construction occurred.

xvii

The 1985-1995 forecast of population for Montgomery County was submitted separately to COG and was based on an extension of the low 1975-1985 projection. This projection considered national household formation rates by age specific cohorts, or subgroups of the population, as estimated by the U.S. Census Bureau. Estimates were made of the likely household increases in Montgomery County based on the age distribution of the population in 1985 and 1990. Also no major increases in net in-migrants to the County were projected during the 1985-1995 period, similar to those projected for the period prior to 1985. The assumptions are consistent with estimates made on the national and regional level by the U.S. Bureau of the Census indicating a drop-off of migration to major metropolitan areas such as Washington D.C.

As with all long-range projections these estimates are subject to certain assumptions about future economic and demographic events, many of which are of course subject to unforeseen changes. The COG cooperative

forecasting process, which is designed to monitor observed changes as they occur, offers a mechanism for analyzing change and adjusting the forecasts accordingly on a continuing basis.

The COG Cooperative Forecast indicates that major growth in population is anticipated in the suburban jurisdictions whereas the core area (D.C., Alexandria and Arlington, Va.) is expected to grow more slowly after 1980 following an overall decline in the 1970's. The outer suburbs of Loudoun and Prince William Counties, Va., which almost doubled in population during the 1960's are expected to have the largest percentage growth in the coming decades. Jurisdictions in the inner suburbs (Prince George's County, Md., Fairfax and Falls Church, Va.), will continue to grow faster than the metropolitan area through 1985. The national trend to population growth in exurbia is reflected in the anticipated growth in the areas in the outer ring due to the availability of land and housing and community preferences.

The pattern of household growth is generally expected to follow population trends. By 1985, major increases are anticipated in the inner and outer suburbs whereas the number of households in the core area is forecasted to grow at substantially slower rates than the region as a whole.

Average household size is expected to decline in all jurisdictions, with the core area continuing to house the smallest average size households and the outer suburbs, the largest. The decline in average household size in Montgomery County from 3.34 in 1970 to 2.69 in 1995 is indicative of a decline in all jurisdictions.

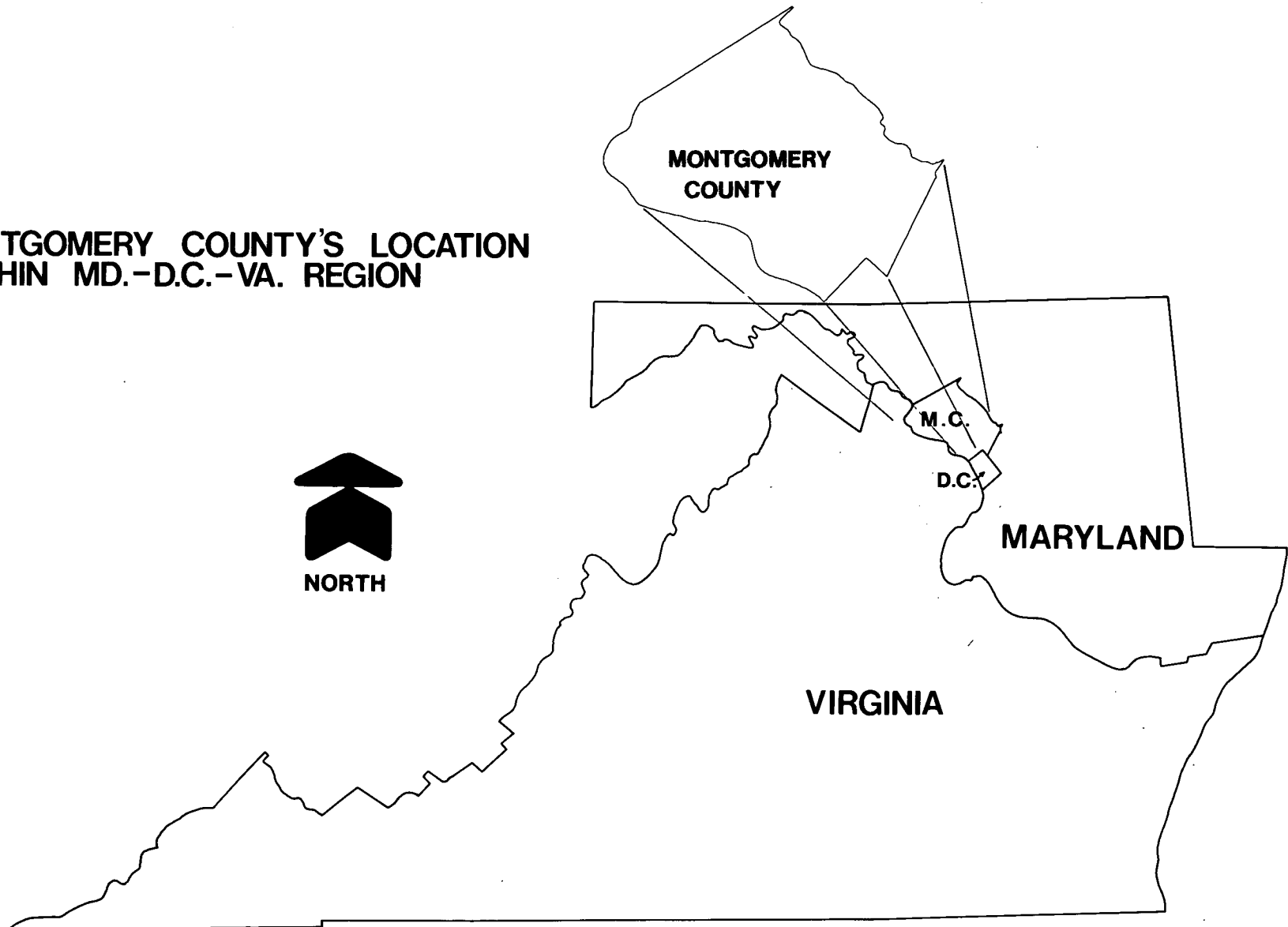
All jurisdictions are forecasted to increase their job total by 1995, however major gains are anticipated in the jurisdictions of the inner and outer suburbs where the number of jobs are anticipated to double their 1972 estimate. Jobs in Montgomery County are expected to increase at a rate well above the metropolitan area average of 63 percent.



*Population  
Household  
Employment  
Growth Forecast*

**MONTGOMERY COUNTY'S LOCATION  
WITHIN MD.-D.C.-VA. REGION**

2

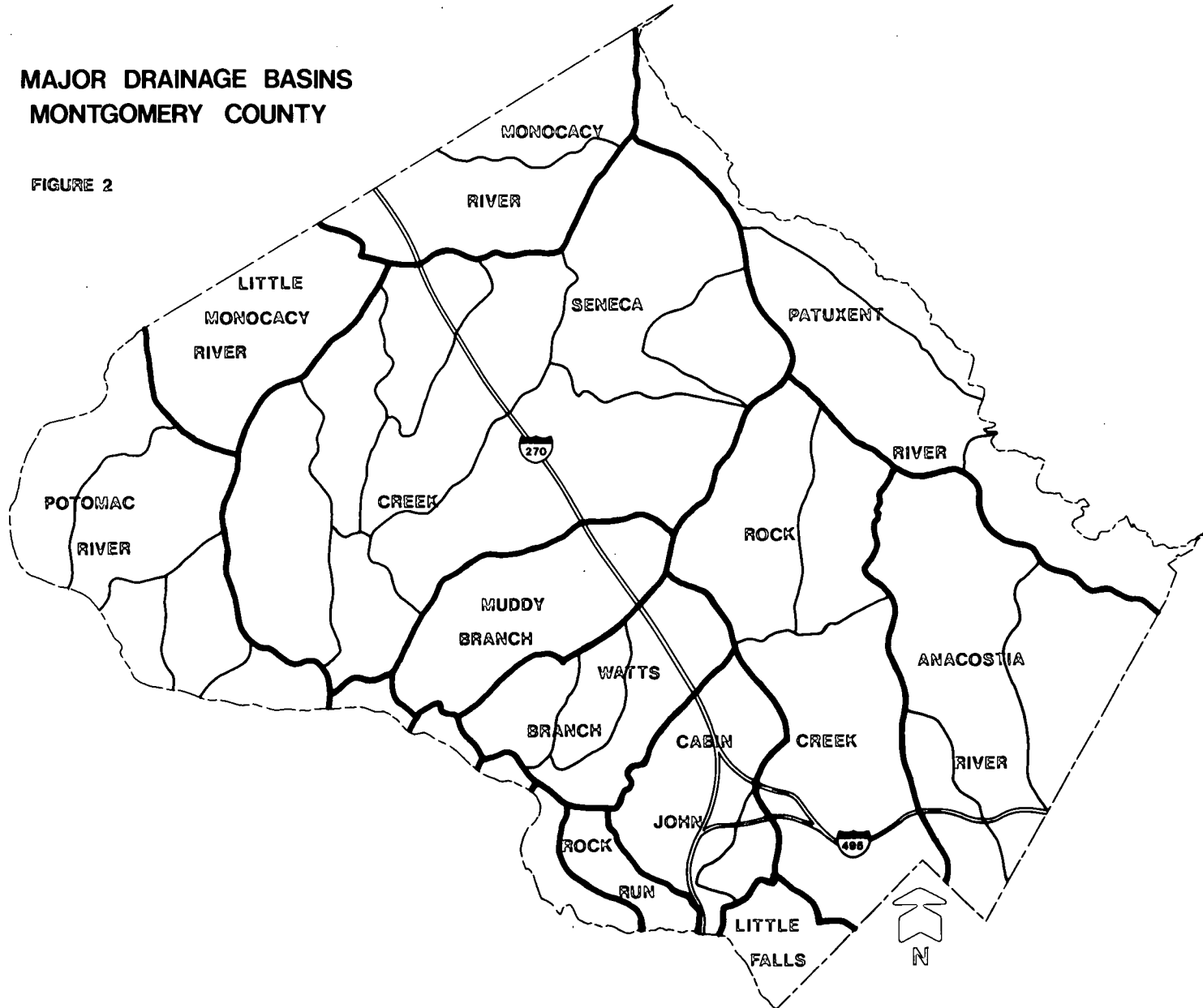


**FIGURE 1**



# MAJOR DRAINAGE BASINS MONTGOMERY COUNTY

FIGURE 2



## POPULATION, HOUSEHOLD AND EMPLOYMENT GROWTH FORECAST 1976-1986 MONTGOMERY COUNTY

### SECTION 1 - INTRODUCTION

#### IMPORTANCE OF A NEW FORECAST

The 1976-1986 Forecast document significantly updates the previously published forecast. This revision was prompted by a number of events and studies which occurred during the two years since the last document was published. During 1974 two major household surveys were conducted which provided information on demographic trends which are influencing growth and change in Montgomery County--the Planning Board's Census Update Survey, and the Washington Center for Metropolitan Studies' Trends Alert survey. The studies showed that population growth was decelerating from the high rate of the 1960's and that there are a number of subtle changes in the makeup of the population of the County and in the region which would tend to make the extrapolation of past trends or straight line projecting unreliable for forecasting future growth.

Other developments and trends at local, regional, and national levels have also indicated the need to develop a new forecast. This July the Metropolitan Washington Council of Governments (COG), in conjunction with the staffs of the local member jurisdictions, completed the first major revision to the region's forecast of population and employment activity since 1968. The Planning Board's growth policy studies of the past two years have included extensive analysis of alternative growth assumptions. The previous forecast and four alternative projections were the basic input into the fiscal impact analysis which was the focus of the Second Annual Growth Policy Report. Follow-up analysis requested by the County Council required the development of a more

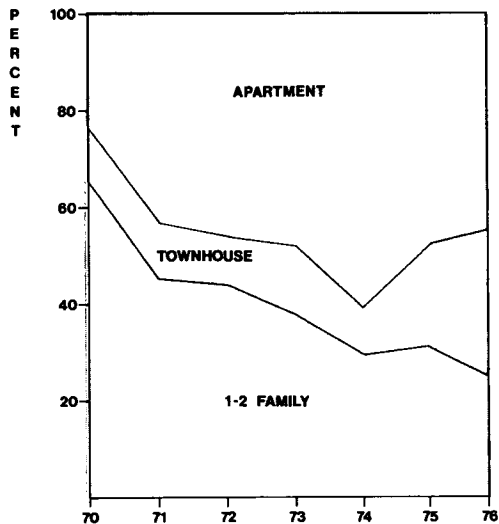
realistic range of forecasts to assess the impact of a changing growth rate on the County's revenue and expenditure projections. Recent studies which influenced the development of a new forecast also include a whole range of U.S. Census Bureau reports on such topics as regional population growth, mobility, household formations, and changing fertility rates.

Recent events which have led to the design of a new forecast include a major slump in residential construction at both the regional and local levels, a change in the rate of economic growth in general, the energy crisis, restrictions of the local sewer moratorium and changes in the housing structure mix. Sixteen years ago 87 percent of the dwelling units in the County were detached single-family units. During the 1960's, first garden apartments, and then high-rise apartments, became an important share of new construction activity. There were a number of supply and demand conditions which encouraged this diversity in the housing market. However, the primary causes were a growth in the young adult age group through immigration and population aging, an overall growth in the number of small households, and increases in land and construction costs. By the early 1970's the product diversity of the construction industry began to accelerate. The townhouse was successfully introduced to the suburbs, although it was previously considered to be an antiquated form of city housing. The townhouse has been followed by the condominium apartment and now by the re-emergence of the basic single-family home.

Looking back upon what caused the many changes in the suburban housing market over the past 16 years can help us forecast what will likely happen in the next 5-year



**CUMULATIVE PERCENT DISTRIBUTION OF HOUSING COMPLETIONS BY TYPE OF STRUCTURE 1970-76\***



SOURCE: HOUSING UNIT DATA ESTIMATED BY M.C.P.B. STAFF FROM RECORDS OF THE SUPERVISOR OF ASSESSMENTS FOR MONTGOMERY COUNTY.

\* DATA COVERS THE PERIOD JAN.-APRIL 1976  
FIGURE 3

and 10-year periods. We have been discussing prospects for the housing market with several well-known experts and, for the purposes of this introduction, it is sufficient to state that we are projecting a lower level of apartment construction than in previous forecasts. While high land, construction and financing costs are an important impediment to the construction of new rental units, changing demand conditions will likely be the primary cause for a lower level of apartment construction. In-migration, which was the greatest stimulus for apartment construction, is expected to fall to half the rate of the 1960's during the next decade. In addition, the aging of the large number of persons born during the 16-year period after World War II, from the young adult to the adult stages of their life cycles, will mean a shift for many of them from apartments into single-family homes and townhouses.

#### POLICY QUALIFIED TREND PROJECTION

This document provides a forecast and analysis of anticipated population, housing unit and employment trends in Montgomery County over the next 10 years in two 5-year periods (January 1976-January 1981, and January 1981-January 1986). Estimates of the aggregate marginal growth by Planning Area and Drainage Basin likely to occur by 1981 and 1986 are provided. No attempt is made to estimate growth on a year by year or incremental basis, because of the uncertainty and cyclical nature of population and construction movements. The estimates included in this document will be updated by the Planning Board on an annual basis through a monitoring of all major development information indicators in the County. Interim reports by the Research Division will be prepared as new information and trends warrant. In addition, it is anticipated that the Planning Board's urban growth policy studies will continue to lead to further refinement of the content and the methodology incorporated in this document.

The Forecast represents a policy qualified trend projection of construction, employment and demographic trends which are now evident. Policies with regard to Master Plans and zoning are explicitly taken into account in forecasting the location of future population. Where market trends are expected to conflict with stated public policy, it is anticipated that development will conform to policy guidelines.

Throughout the analysis certain policy assumptions are held constant. Foremost among these are such major statements of official policy, endorsed in the past by the County Council, as (1) the Wedges and Corridors General Plan and area Master Plans, (2) the Montgomery County Ten-Year Water and Sewerage Plan, (3) the stated intention of the County Council to maintain sufficient sewage treatment capacity to provide for population growth in the interim before the Advanced Wastewater Treatment plant is built, and (4) the adopted Regional Transit System of the Washington Metropolitan Area Transit Authority. Emerging from these policy statements is a general assumption that, over the next 10 years at least, high density urban development will be located essentially within the I-270 Corridor. Moderate density urban development will be contained within the areas scheduled for public sewer and water service under the ten-year plan, and transit will extend as planned but not further north than Shady Grove and Glenmont. In addition, it is assumed that arterial roads will be extended in a balanced fashion without undue concentration on any subsector of the County.

As future growth policies are adopted involving more specific development objectives and as implementation policies become more clearly established, later versions of this Forecast will reflect the changes in trends which are likely to result.

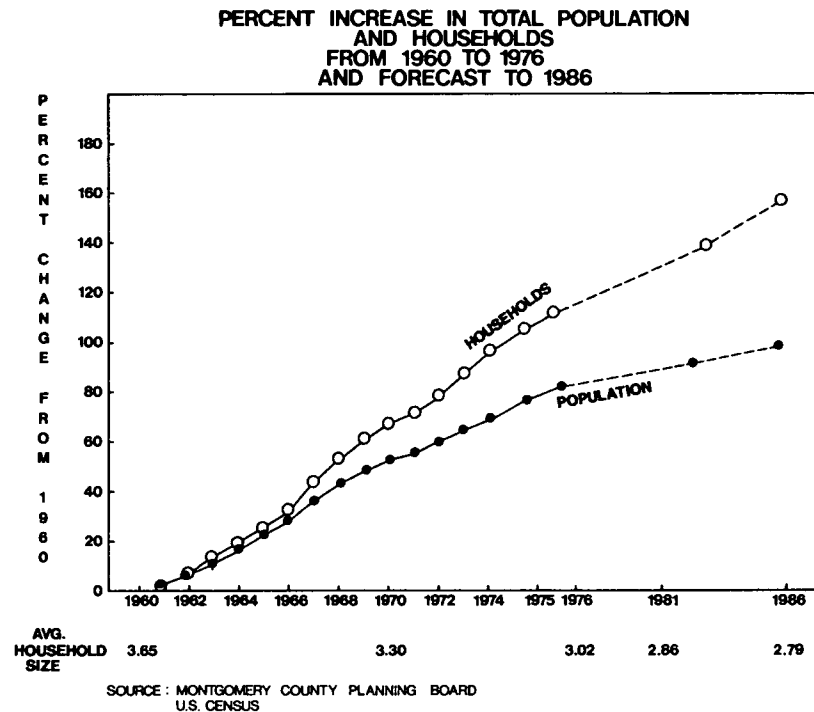


FIGURE 4

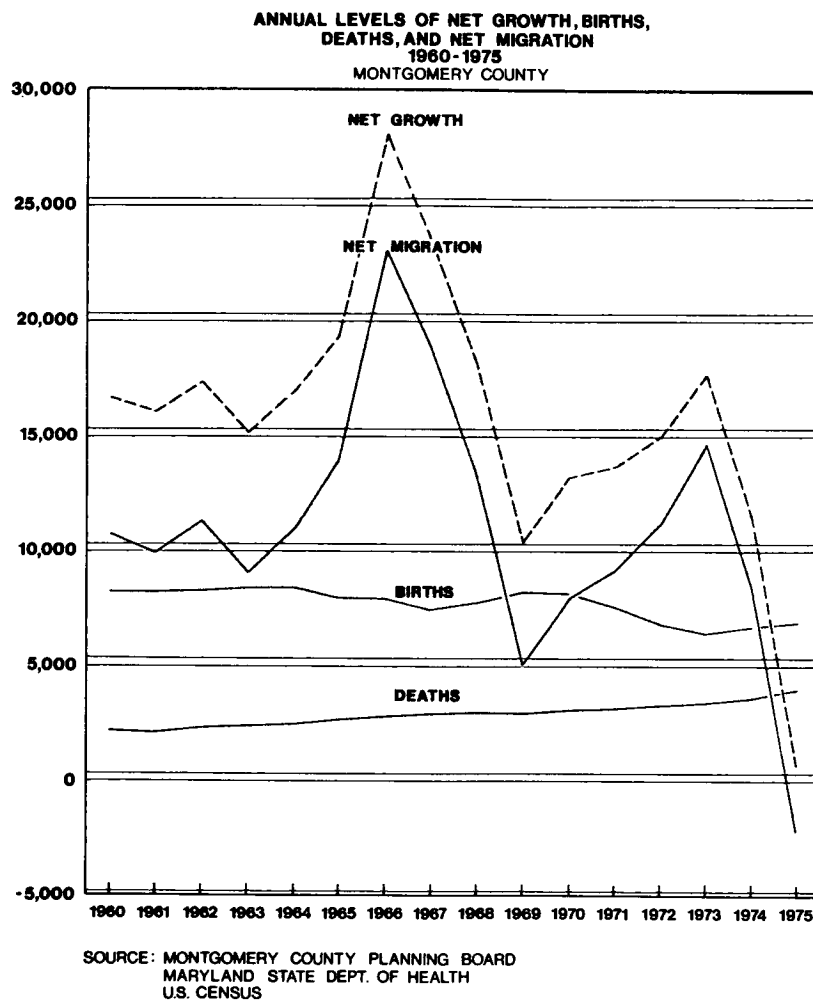


FIGURE 5

### USE OF THE FORECAST

The data in this Forecast meets the needs of a diverse array of private and governmental planning operations. Many of a population's needs for services and products are correlated with its age-sex structure, and other population, household, and employment statistics. By combining the forecasts in this book with their own specialized knowledge, planners in such diverse fields as medical care, public safety, retail sales, construction, recreation, public utilities, transportation, government services, education and other fields can make reasonable projections of the needs for their specialties in various parts of Montgomery County.

The Forecast is intended for use by local government agencies in preparation and review of such documents as the Capital Improvements Program, Ten-Year Water and Sewerage Plan, and Public Services Program. Within the Park and Planning Commission the forecasts are used extensively in preparing and evaluating Master and Sector Plans, development of the Park, Recreation and Open Space Plan (PROS), and in formulating alternative scenarios for our Growth Policy studies. The PROS Plan uses the Demographic Model, upon which these forecasts are based, to project peak and long-term utilization rates for swimming pools, tennis courts, and other facilities. Use of this data permits intelligent staging and scaling of facilities by turning the clock at an accelerated rate to forecast when population fluctuations will occur. The alternative "wait and see" approach is often costly. For instance, using the forecast may prevent building a swimming pool with sufficient capacity for a peak utilization span of only a few years when the useful life of the facility is 20 years or more.

One hospital in the County projects future patient loads by comparing records of its patients' ages and addresses with forecasted age patterns by location.

## SECTION 2 - ESTIMATED 1976 POPULATION AND CURRENT DEVELOPMENT TRENDS

### HOUSING UNIT INVENTORY AND JANUARY, 1976 POPULATION ESTIMATE

The Montgomery County population total was estimated to be 590,000 as of January, 1976. Since the 1970 Census, population has increased by an estimated 67,200 persons. This represents an average annual rate of 11,200 or 2.1 percent per year, which is 30 percent less than the average annual increase of 16,200 persons during the comparable period 1960-1966. Population has not grown at a continuous or steady rate since 1970. The average rate of growth was 13,800 persons per year from 1970 to 1974, slowed to 11,500 during 1974, and total population remained virtually constant during 1975. In the short run, changes in Montgomery County's population growth rate are primarily caused by fluctuations in the residential construction cycle since growth is heavily dependent upon in-migration.

Additions to the Housing Stock - Analysis of tax assessment records indicates that during 1975 there were only 2,189 housing completions, resulting in the lowest annual increase since completions were first tabulated in 1960. Only twice before were completions below 5,000. In 1970 the annual increase was 4,162, and in 1960 it was 4,033. The record low level of construction was not unique to Montgomery County since 1975 marked a severe cyclical drop in residential construction nationally.

Analysis of the housing unit completions by forecast area shows that of the 34,656 dwelling units completed since 1970 the major share was concentrated in the I-270 Corridor and the Urban Ring. Of the total activity, the I-270 Corridor captured 35.0 percent, the Urban

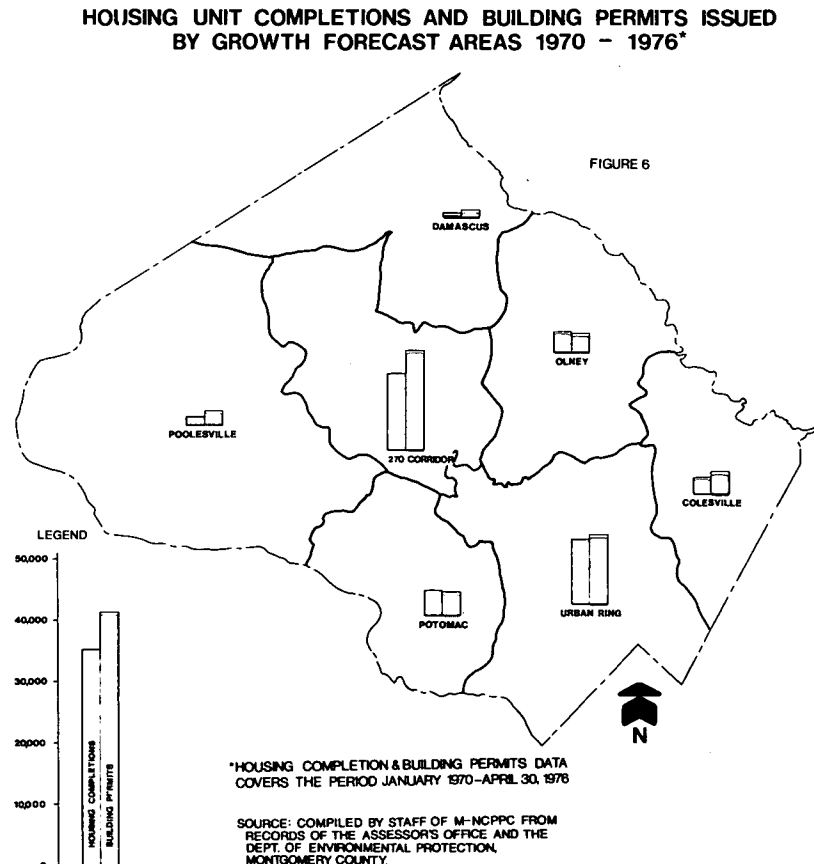


TABLE 1  
MONTGOMERY COUNTY  
POPULATION AND HOUSING UNIT COMPLETIONS  
1960-1976

Year	Popula- tion Estimate	Single-Family Units			Multi- Family	% of Total	All Dwelling Units
		1 & 2 Family Detached	Town- house*	Total			
1960	340,928	2,578	-	2,578	1,455	36.1	4,033
1961	353,400	3,029	-	3,029	2,260	42.7	5,289
1962	369,500	3,200	-	3,200	2,613	45.0	5,813
1963	386,900	2,978	-	2,978	2,064	40.9	5,042
1964	402,000	3,139	-	3,139	2,653	45.8	5,792
1965	418,900	4,125	-	4,125	2,626	38.9	6,751
1966	438,200	3,610	-	3,610	6,835	65.4	10,445
1967	466,300	3,367	-	3,367	5,487	62.0	8,854
1968	489,900	2,761	-	2,761	4,285	60.8	7,046
1969	508,200	3,136	-	3,136	3,670	53.9	6,806
1970	522,800	2,685	453	3,138	1,024	24.6	4,162
1971	531,700	3,006	827	3,833	2,807	42.3	6,640
1972	545,400	3,238	830	4,068	3,365	45.2	7,433
1973	560,400	3,265	1,179	4,444	4,024	47.5	8,468
1974	578,100	1,728	554	2,282	3,489	60.5	5,771
1975	589,600	730	411	1,141	1,048	47.9	2,189
1976	590,000	130	144	274	218	45.3	492

\*Townhouses were not counted separately before 1970.

SOURCES: Housing unit increase data estimated by MCPB Staff from records of the Supervisor of Assessments for Montgomery County; 1960 and 1970 population estimates are April estimates from the U.S. Census of Population; all other population figures are January estimates by the Montgomery County Planning Board.

Ring 29.8 percent, Potomac 11.6 percent, Olney 9.8 percent, while the Colesville, Poolesville and Damascus areas accounted for the remaining 13.8 percent.

**Population Increase** - The I-270 Corridor received about one-half or 50.5 percent of the County's net population increase since 1970, while Potomac followed second with 20.0 percent, and Olney received the third highest percent share with 16.0 percent. The remaining forecast areas accounted for 13.5 percent of total County population growth. Several planning areas in the Urban Ring experienced net declines in total population (generally those with a large percentage of older single-family homes), although new dwelling units were completed and the number of households increased. This phenomenon occurred because of a dramatic decline in average household size--9.2 percent Countywide since 1970. This decline in the average number of persons per household is by no means only a local occurrence but reflects national trends toward a smaller number of children per family, the aging of the population, the formation of new households as older children leave home, and the increase in the number of persons who live alone.

**Building Permits and Completions** - Supplementary Tables S-6 and S-7 show building permit activity for 1970 through 1975 by planning areas and drainage basins. Figure 6 compares the number of building permits with housing unit completions by forecast areas since 1970.

Analysis of the permit data shows that the County appears to be coming out of a residential construction slump which hit bottom in 1974 and 1975 after a relative peak in 1971 and 1972. Countywide permit activity is up 354% while completions are down by 60% for the first four months of 1976 over the comparable 1975 period. This is characteristic of a bottoming out

since permits are a lead indicator for completions. Increased availability of financing and allocation of new interim sewage treatment capacity are seen as contributing to this upturn.

Over the past 3 years housing completions have outnumbered permits by 5,105 or 45 percent. This sizeable reduction in outstanding building permits is attributable both to the stockpiling of permits prior to the sewer moratorium and the difficulty of getting permits during the moratorium.

The I-270 Corridor Forecast Area continues to receive the largest share of building permit activity. During 1974 and 1975, 58 percent of the permits issued were in the I-270 Area and 16 percent were in the Urban Ring Area. Ten percent of the activity was in Poolesville and the remaining 15 percent was in other areas of the County.

The wide swings in the residential construction cycle are attributable to both national forces such as mortgage markets and to local forces such as the sewer moratorium. The recent effects of the sewer moratorium in the County were coincident with a national credit crunch which severely dampened housing construction. The effects of the moratorium and other local factors should not be over-emphasized.

#### DEVELOPMENT ACTIVITY 1970-1976 AND ANTICIPATED SHORT TERM TRENDS

From the supply side, the private development process generally proceeds in several steps beginning with zoning, preliminary plans, record plats and ending with a building permit and a dwelling unit completion. This entire process could take one year or more depending on availability of sewer, effective demand of potential buyers, and monetary conditions.

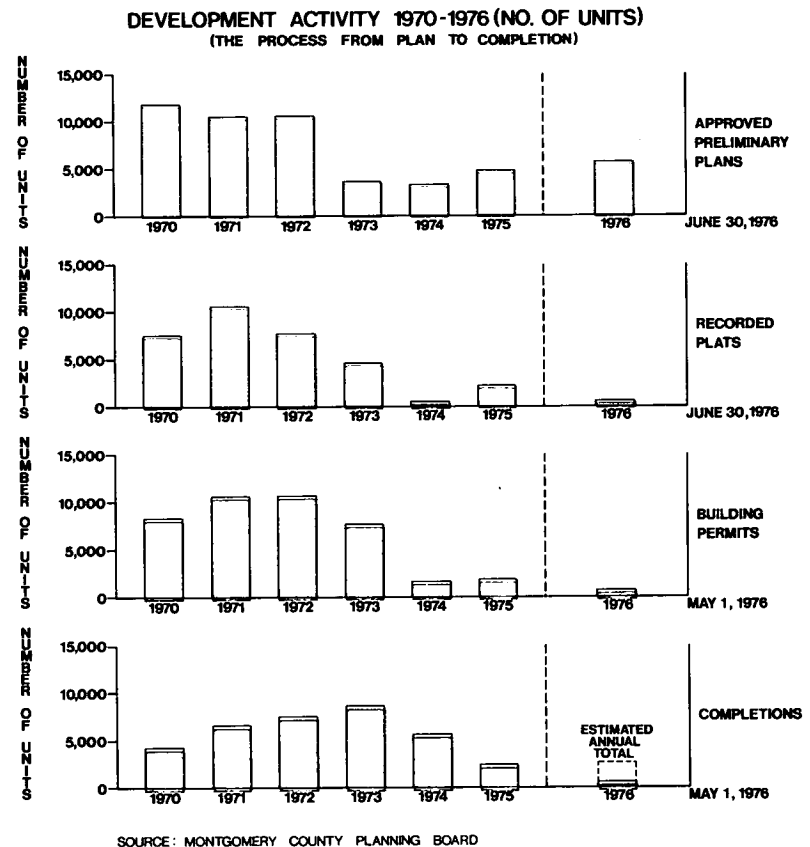


FIGURE 7

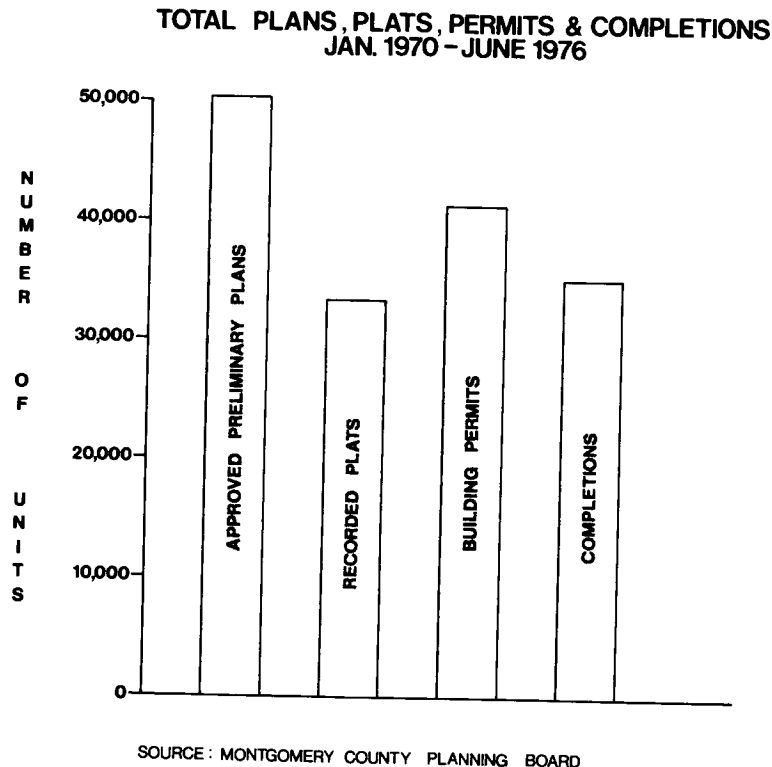


FIGURE 8

Since not all plans are realized, the number of potential dwelling units in approved preliminary plans, record plats, and building permits is likely to exceed the number of dwelling unit completions for any period. During the period 1970-1974, Montgomery County experienced high levels of growth, which tapered off over the last several years as the monetary situation tightened. From January 1970 to May 1976, the number of permits issued totalled 41,382 units exceeding the 35,155 completions by 17.7 percent (see Figures 6 through 8). As shown in Figure 7, the growth process may be examined by analyzing what occurs in each stage of development. Monitoring this development process in addition to using the Demographic Model enables the analyst to anticipate and forecast short-term population and household growth at the County level. Figure 8 attempts to summarize development activity from 1970 through June 30, 1976. Dwelling unit completions increased rapidly between 1970 and 1973 as builders anticipated a good housing market. However, activity declined significantly in the years 1974 and 1975, and in the first four months of 1976 the level of completed units (492) fell 60.3 percent from the comparable period in 1975. Furthermore, the construction rate recorded in the first quarter of 1976 is well below the level observed for the entire 1970-1976 period. This information leads the analyst to conclude that approximately 2,500 units will be completed in 1976.

Supplementary Table S-10 shows numbers of outstanding sewer commitments by forecast and planning areas. This data indicates that 69 percent of the outstanding commitments are located in the I-270 Corridor, while Colesville and Potomac areas have 10 percent, respectively. Forty-eight percent of the outstanding sewer commitments are slated for multi-family construction.

Study of the trend of plat recordings provides the

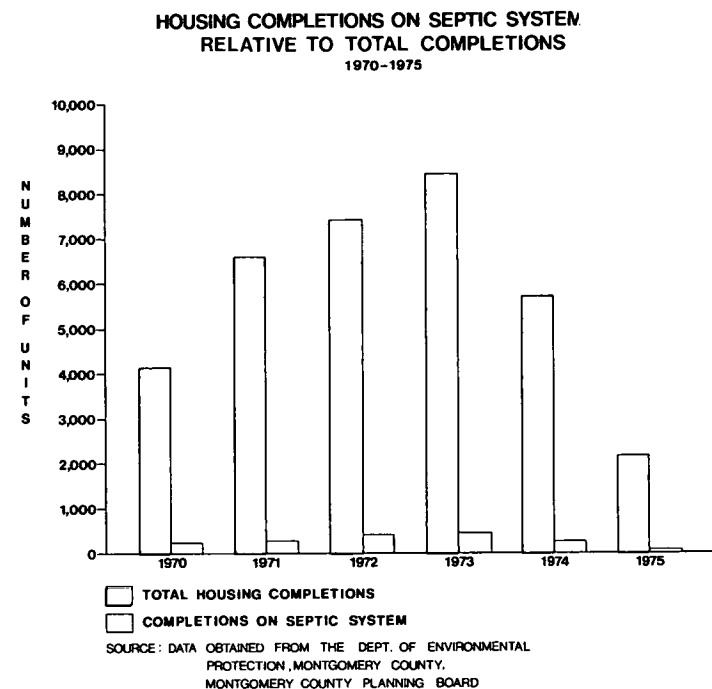
planner with valuable information which can be utilized for forecasting residential development. Plat recordings characterize the third stage of the planning process and are indication of land available for immediate development pending the issuance of building permits and sewer hookups or septic approvals. The volume of plats recorded for the 1970 to June, 1976 period was 33,135 units. This is 5.7 percent less than the number of units built in the same period. Examination of plat recordings for the period shows that plat activity has declined steadily from 1973. This fall-off in activity from 1973 to 1976 is due to the difficulties experienced by builders in obtaining mortgage financing for their projects and also, to some extent, reflects the changing sewer situation.

Analysis of subdivision data by forecast areas for 1971-1975 indicates that the Urban Ring and I-270 Corridor accounted for 66.2 percent of the activity in 1971, 47.8 percent in 1973 and 42.5 percent in 1975. Colesville and Potomac Forecast Areas captured 23.2 percent in 1971, 35.3 percent in 1973 and in 1975 the data was more evenly distributed among the forecast areas.

The volume of units in approved preliminary plans is the best lead indicator of development which is likely to occur two or more years in the future. However, it does not distinguish activity likely to be delayed beyond the normal lead period because of a tight monetary situation or limitations imposed by the housing market. Approved preliminary plans for the 1970-1976 period amounted to 50,042 units. This exceeds completed units by 42.3 percent. Analysis of preliminary plans information for the period shows that the level of activity has declined from 11,875 units in 1970 to 4,900 units in 1975, a decrease of 58.7 percent. This dramatic decline in the approval of preliminary plans occurred primarily because of the stringent growth control measures of the early 70's and, also, due in part to the lack of available

construction funds. Data for the first six months of 1976 reveals that the rate of approvals has increased 38.9 percent over the comparable period in 1975 and, also, is above the levels observed during 1973-1975.

Figure 9 shows the number of units constructed on septic systems in Montgomery County from 1970-1975. Examination of this information reveals that 1,862 units were built as compared to 2,859 units from 1964 to 1969. Analysis of the figure indicates that activity increased steadily from 1970 to 1973, but plunged downward from 1974-1975 largely because of new, stiffer standards for septic approval.





### SECTION 3 - FORECASTING METHODOLOGY AND REGIONAL GROWTH

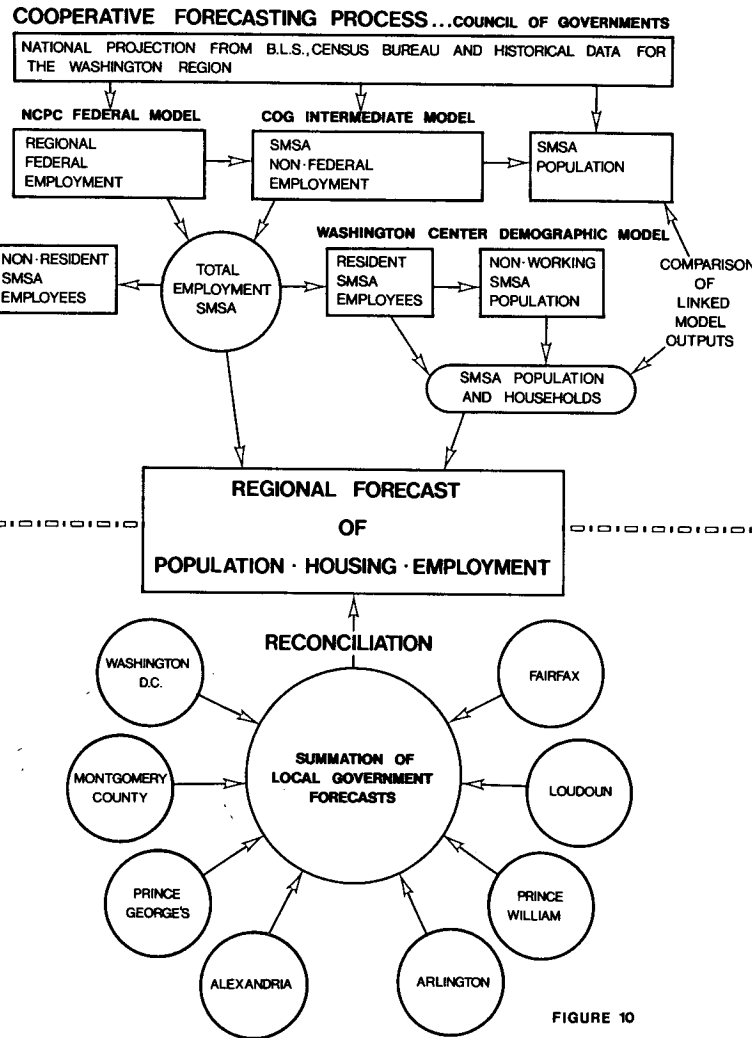


FIGURE 10

The growth of Montgomery County population and employment is, over the long run, closely linked with the growth of Washington, D.C. metropolitan area. The development, in 1975, of the Metropolitan Washington Council of Governments (COG) Cooperative Forecasting Process is an aid in incorporating both regional and local factors into our forecasting process.

#### COG COOPERATIVE FORECASTING PROCESS

COG has undertaken a program designed to coordinate the growth policy efforts of local governments with one another and with the activities of the Federal and State governments and other agencies whose programs affect the growth and development of the Washington metropolitan area. This metropolitan growth policy program was initiated one year ago in response to recommendations from local government officials as well as to meet metropolitan planning requirements associated with various federal programs and standards.

The initial phase of the program is to develop a forecast of population, household and employment growth. This will be followed by an impact assessment program which will translate the results of the cooperative forecast into information about their potential impact on various aspects of the living environment of the Washington area. The final phase is to examine the information produced through the impact assessment program, in conjunction with previously adopted regional policies, to provide a basis for development of a metropolitan growth policy statement.

Forecasts of future population, households and employment to the year 1995 have recently been completed

and accepted by the Planning Directors for use in regional functional planning programs. The forecasts were developed cooperatively by COG and local governments, the National Capital Planning Commission, The Northern Virginia Planning District Commission and the Washington Center for Metropolitan Studies. The schematic in Figure 10 describes the process. Forecasts have been made by the local governments and submitted to COG. Independent of the local forecasts, regional statistical projections are made through a system of statistically linked models to provide a reference projection to compare to the local forecasts. A comparison of these linked projections and local area forecasts was made and reviewed by the Planning Directors' Technical Advisory Committee, and forms the basis for the recommended reconciliation. The terms used, i.e., projections, forecasts, and estimates signify distinctions in the estimating process and are defined as follows:

**Projections** - Numbers based on trend analysis utilizing statistical techniques

**Policy Estimates** - Numbers based upon proposed or adopted policy and plans

**Forecasts** - Projections tempered by policy estimates; i.e. reconciliation of past and current trends with current and future policy.

In general, the forecasts provided by local governments contain elements of both statistical analysis and policy estimates. Regional projections are developed linking three statistical models as shown in the schematic.

Comparisons of the results of the linked model with those obtained by summarizing local area forecasts of population to regional totals are very close; the maximum difference for any forecast year was 4%.

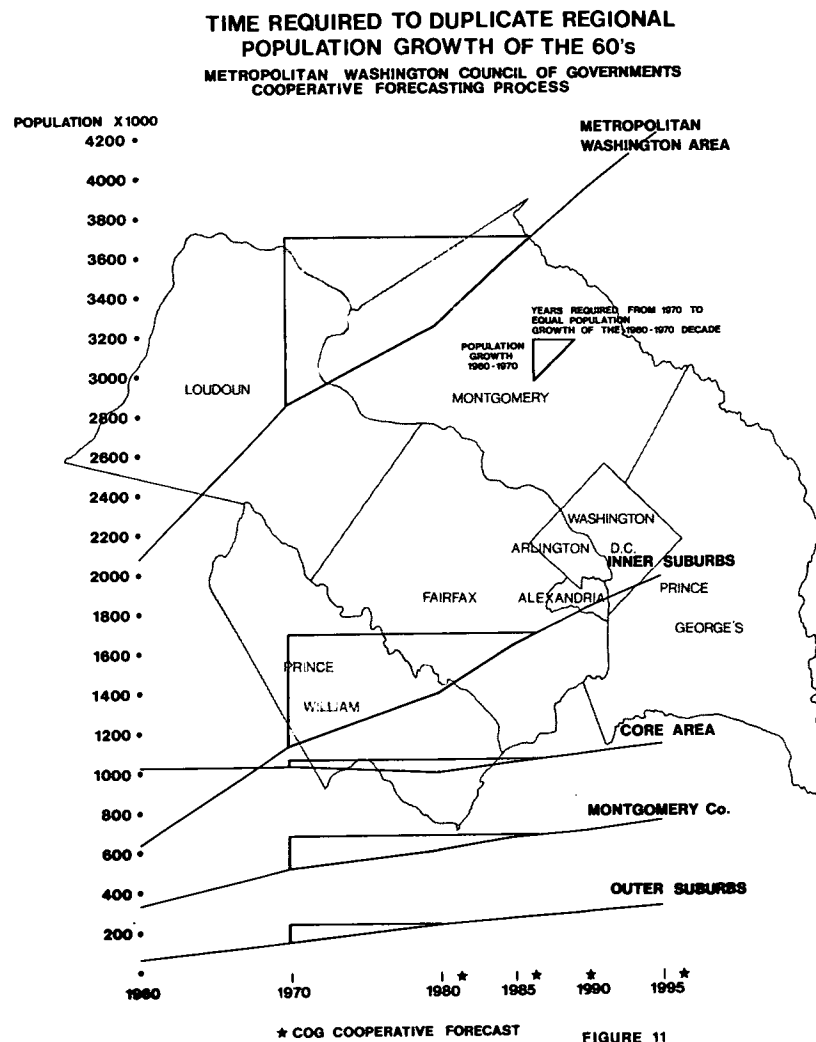


TABLE 2

COG FORECAST OF EMPLOYMENT  
IN WASHINGTON AREA, 1972-1985  
(In Thousands)

Jurisdiction		1972	1980	1985
Wash. Metro Area <sup>1/</sup>		1433.0	1731.4	1911.8
Core Area <sup>2/</sup>		805.1	915.0	965.1
Inner Suburbs		585.1	755.8	877.2
Montgomery Co.		219.7	288.5	323.5
Other <sup>3/</sup>		365.4	467.3	553.7
Outer Suburbs <sup>4/</sup>		42.8	60.5	69.6
Average Annual Increase in Employment				
16 Wash. Metro Area <sup>1/</sup>			37.3	36.1
Core Area <sup>2/</sup>			13.7	10.0
Inner Suburbs			21.3	24.3
Montgomery Co.			8.6	7.0
Other <sup>3/</sup>			12.7	17.3
Outer Suburbs <sup>4/</sup>			2.2	1.8
Montgomery Co. Share (%) of Regional Growth				
			23.1	19.4

<sup>1/</sup>As defined in 1970  
<sup>2/</sup>Includes D.C., Arlington, & Alexandria  
<sup>3/</sup>Includes Prince George's, Fairfax Co.,  
Fairfax City and Falls Church  
<sup>4/</sup>Includes Loudoun & Prince William Cos.

Similarly, estimates of the number of households developed by the linked model and those of the local jurisdictions were very close. The forecasts developed by the local governments are recommended for use in planning programs; however, the totals from the regional projection model are reported for reference and comparison purposes.

Regional projections of employment were made by the linked model system; in addition, a trend projection for local jurisdictions was made for review and modification by the local governments. The resulting employment totals (after modification) agreed very closely with the regional projections. In recognition of the fact that employment is the main driver of the linked model system and should be the most statistically reliable output, the regional totals were accepted, and the totals proportionately allocated to jurisdictions based on their distributions.

In summary, the system operates both from a top-down approach (regional totals to local area components) as well as from the bottom-up (sum of local areas = regional totals). It involves a consortium of local governments familiar with policies and trends, and affords them an opportunity to contribute to the process. The entire process is designed to be repeated periodically and thereby provide an opportunity for monitoring of forecast accuracy, improvement in projection techniques and responsiveness to newly-developed policy and plans.

The COG forecasts of population, households and employment for Montgomery County and the rest of the region are shown in Tables 2, 3, and 4.

TABLE 3  
COG FORECAST OF POPULATION IN WASHINGTON AREA  
1960-1985  
(In Thousands)

Jurisdiction	1960	1970	1980	1985
Washington Metro Area <sup>1/</sup>	2076.6	2861.1	3256.9	3603.3
Core Area <sup>2/</sup>	1018.4	1041.7	1002.7	1052.2
Inner Suburbs	983.5	1671.2	2014.4	2279.2
Montgomery County	340.9	522.8	608.6	677.8
Other <sup>3/</sup>	642.6	1148.4	1405.8	1601.4
Outer Suburbs <sup>4/</sup>	74.7	148.3	239.8	271.9

Average Annual Change in Population

Washington Metro Area <sup>1/</sup>	78.5	39.6	69.3
Core Area <sup>2/</sup>	2.3	- 3.9	9.9
Inner Suburbs	68.8	34.3	53.0
Montgomery County	18.2	8.6	13.8
Other <sup>3/</sup>	50.6	25.7	39.1
Outer Suburbs <sup>4/</sup>	7.4	9.2	6.4

Montgomery County Share (%) of Regional Growth

23.2	21.7	19.9
------	------	------

<sup>1/</sup>As defined in 1970

<sup>2/</sup>Includes D.C., Arlington and Alexandria

<sup>3/</sup>Includes Prince George's, Fairfax County, Fairfax City and Falls Church

<sup>4/</sup>Includes Loudoun and Prince William Counties

TABLE 4  
COG FORECAST OF NUMBER OF HOUSEHOLDS AND  
AVERAGE HOUSEHOLD SIZE IN WASHINGTON AREA  
1970-1985

Jurisdiction	1970	1980	1985	Changes 1970-85	
				No.	Percent
A. No. of Households (In Thousands)					
Washington Metro Area <sup>1/</sup>	898.6	1142.2	1290.0	391.4	43.6
Core Area <sup>2/</sup>	374.4	401.8	438.0	63.6	17.0
Inner Suburbs	486.0	676.7	777.9	291.9	60.1
Montgomery County	156.7	213.8	243.8	87.1	55.6
Other <sup>3/</sup>	329.3	462.9	534.1	209.8	62.2
Outer Suburbs <sup>4/</sup>	38.2	63.7	74.1	35.9	94.0
B. Average Household Size					
Washington Metro Area <sup>1/</sup>	3.18	2.85	2.79	- .39	- 12.3
Core Area <sup>2/</sup>	2.78	2.50	2.40	- .38	- 13.7
Inner Suburbs	3.44	2.98	2.93	- .51	- 14.8
Montgomery County	3.34	2.85	2.78	- .56	- 16.8
Other <sup>3/</sup>	3.49	3.04	3.00	- .49	- 14.0
Other Suburbs <sup>4/</sup>	3.88	3.77	3.67	- .21	- 5.4

<sup>1/</sup>As defined in 1970.

<sup>2/</sup>Includes D.C., Arlington and Alexandria

<sup>3/</sup>Includes Prince George's, Fairfax County, Fairfax City and Falls Church

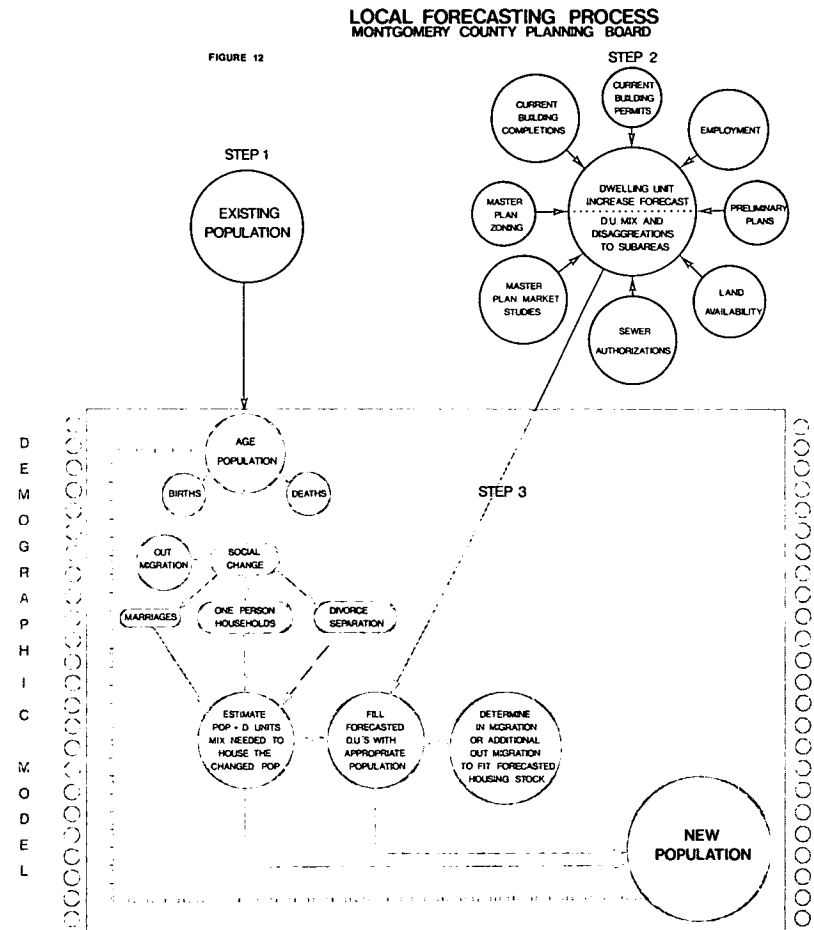
<sup>4/</sup>Includes Loudoun and Prince William Counties

## LOCAL FORECAST METHODOLOGY

The population projections of the Montgomery County Planning Board are updated on an annual basis. Revisions are made as technical improvements become available through more refined statistical tools, such as the Demographic Model, and better information on supply and demand conditions. The Urban Development Monitoring System provides periodic data on a wide range of population indicators. Figure 12 attempts to highlight the many elements which are included in the population forecasting process. The elements of the process can be summarized under three major steps. The first step estimates the current population. The next step forecasts future residential construction utilizing the Urban Development Monitoring System. The last step forecasts the demographic changes which are likely to occur in the current population and the population which will result from new housing construction. The operation of this final step has been greatly improved by the use of the recently developed Demographic Model.

Steps I and II - To prepare population and household estimates and construction forecasts it is necessary to develop an extensive information base. Data on the status of land in the County, such as zoning density, sewer service status, land use, etc., is required. Additional information is needed on dwelling units added to the assessor's files and residential building permits issued for new construction. Extensive data developed from the 1970 Census and local surveys are required for small subareas of the County. The sum of these information efforts has been termed the Urban Development Information File.

Urban Development Information File - The Urban Development Information File is designed to assist the process of measuring and planning development in



Montgomery County. It contains measurements of land utilization and development indicators that relate to the decision-making activities of the private development market. From the file it is possible to retrieve this information in a form useful for the evaluation of the activities of government which serve this development. The Montgomery County Planning Board has initiated a semi-annual system of reporting data on the development market in Montgomery County. Reports are available upon request from the Research Division of the Montgomery County Planning Board.

Chart 1 depicts the data outputs available from the file. They are arranged on the horizontal axis by the time frame of the construction activity which they indicate: current activity, short-range trends, long-range trends and the ultimate capacity for development. On the vertical axis are the various geographic subareas for which specific tabulations are currently coded. Efforts

are under way to automate various aspects of the information file. These include adding land use, dwelling unit, and zoning information to the Assessment File now in existence on County data processing equipment and devising a systematic updating procedure. In addition, the data from the Planning Board's 1974 Census Update Survey is on computer tape allowing automatic retrieval. As efforts continue to automate greater portions of this information base, the updating procedures and retrieval programs can be expanded to better aid the public decision-making process. In April, 1977, the Planning Board will be conducting its second Census Update Survey.

Selected tables included in the supplementary tables of this report give complete tabulations of the most important development indicators by planning areas and drainage basins. The following section discusses the development of each of the major data resources of the file.

CHART 1

## URBAN GROWTH MONITORING SYSTEM - URBAN DEVELOPMENT INFORMATION FILE\*

INVENTORY		10-YEAR CHANGE IN INVENTORY & DEMOGRAPHIC CHANGE								PLANNED CAPACITY				
Geographic Area Code					Short Range									
					Lead		Long Range							
			Current		Indicators		Lead Indicators							
	1	2	3	4	5	6	7	8						

\* STATUS AS OF SEPTEMBER 1976

**1970 Census Inventory** - The 1970 total County population and housing unit counts from the U.S. Census of Housing and Population were allocated to planning areas and drainage basins utilizing an automated computer program developed by the Maryland-National Capital Park and Planning Commission staff in cooperation with the Metropolitan Washington Council of Governments. This program converted the standard census geographic base areas (census tracts, enumeration districts and blocks) into designated planning areas and drainage basins. The results of the 1970 Census coded inventory are utilized in Supplementary Table S-5 and along with the 1974 Census Update Survey Data form the basis for all updates and projections for the 1976-1986 period.

**1974 Census Update Survey** - In 1973, the Census Update Survey was authorized by the Montgomery County Council and supported by the Planning Board to obtain current information about the population and housing characteristics of Montgomery County residents. It was recognized that the information provided by the 1970 Decennial Census of Population and Housing was not sufficiently timely to meet the needs of planning officials and citizens in analyzing the interrelationships between people and housing, jobs, schools, transportation, utility and other services, and for evaluating their cumulative effect on the environment.

Computer programs enable the Research Division to respond to individual user needs for more detailed subject matter tabulations, cross tabulations of survey items, or for tabulations by subareas of Montgomery County. The user is cautioned, however, to consider: (1) the questionnaire's subject content to determine whether the requested detail is available, (2) the geographic area detail is compatible with areal units defined in the programs of the Planning Board, (3) the limitations of the sample survey in providing accurate

estimates for relatively small segments of the population and (4) the constraints of the confidentiality provisions under which the survey was undertaken--no information can be divulged which will disclose information on individual respondents.

**Building Permit Information** - Data on the location of all permits issued for dwelling units in Montgomery County during 1969-1972 is arrayed on a 1,000 scale map series, and the 1973-1974 data is plotted on a 3,000 scale base map. It is tabulated by local planning and forecast areas, drainage basins and election districts. This information is continually monitored by the Planning Board staff from the monthly reports of the Departments of Licenses and Inspections: City of Gaithersburg, City of Rockville and Montgomery County, and it is continually updated. Building permit information gives a good indication of development to be constructed usually within one year. Supplementary Tables S-6 and S-7 give tabulation of this data by planning areas and drainage basins.

**Current Assessment Data** - Data on the number of housing units added to the Montgomery County housing inventory since the 1970 Census is obtained from the tax assessment records of the County. This information is monitored three times a year, in May, October and January, based on new units which are completed and added to the tax rolls. The information is collected by subdivision and located on a 3,000 scale County base map by election districts. It is then tabulated and coded by development information areas which are a combination of planning areas and drainage basins. Population estimates are made from the updated housing inventory taking into consideration assumptions about occupancy rates and average household size, Census Update and administrative records such as State Medicare records.



**Subdivision Activity** - Data on the location and size (dwelling units) of approved and pending subdivisions in the County were compiled on a 3,000 scale County base map. This data gives an indication of the extent of development which is likely to occur 2 to 5 years in the future assuming all subdivisions are eventually recorded and developed. Tabulations of recently recorded subdivisions by planning areas and drainage basins are included in Supplementary Tables S-8 and S-9.

**Vacant Land Inventory** - The status of land within the County as of 1971 was shown on a 1,000 scale base map series. The maps indicated whether sewer service was currently available, programmed for installation over a 10-year period, or currently available but under moratorium. Compilation of various vacant land areas of the County by sewer status was then made from these maps based on assumed zoning population holding capacities. As such it gives a good indication of the sewer service constraints for development by local areas of the County as well as a general time frame for the removal of various constraints based on a 10-year sewer service program.

**Planned Zoning Capacity** - The computation of the planned zoning capacity is updated for each planning area and major drainage basin. The data show the distribution of the population holding capacity based on existing and/or proposed zoning of total vacant land for each area. This was obtained from the Montgomery County Vacant Land Inventory completed in 1972 and is on an automated file. During the current fiscal year the Montgomery County Planning Board will be completing work on a new proposed zoning information system. The new system will relate assessment file data on existing zoning and other land characteristics to a file showing land use as proposed in adopted Master Plans.

**Step III - Application of the Demographic Model.** The primary reasons for the model's development are listed below:

- (1) To systematize population projection. The model provides a rational methodology for estimating current population and projecting future population using available demographic and housing stock data. Although there is not a direct link within the model's structure between employment and population growth, the model does project future labor force participation and this information can be used to develop a balanced household, population, and employment forecast.
- (2) To project changes in the age and sex structure of the population.
- (3) To project changes in housing demand. The model projects the number of multi-family and single-family household heads given current preferences by age.
- (4) To assess the impact of population and demographic change on the demand for public and private facilities and services. A community's demands for use of a particular public facility can fluctuate significantly with time. Better information is needed to help plan the most efficient size and location for facilities having a high capital expenditure and useful life of long duration. For example, it may not be reasonable to build an elementary school with sufficient capacity for a peak enrollment span of only a few years, when the useful life of the facility is 30 years or

more. The decision on sizing should benefit from information on the likely magnitude and duration of future facility usage. Other facilities having potential time-related demand fluctuations include: colleges, recreation facilities (especially swimming pools), libraries, and correction institutions.

Often methodologies used to predict the future demand for public facilities rely on a gross indicator such as total population at some future date. More refined methods may use an estimate of average usage correlated with dwelling unit structure type. However, just as the age distribution of total population varies with time, so does the age and hence facility usage of a household unit. Past methodologies have used occasional survey data to update household usage rates, and attempts at predicting future rates are usually limited to a linear projection of past rates. Good time trend data often does not exist and when it does its projection value is lessened by changing patterns such as the declining birth rate.

How the Model Works - The basic structure of the model is outlined on Figure 13. The model is "driven" by five sets of rates which are essentially unique to Montgomery County. The major sources of data include the Planning Board's 1974 Census Update Survey, and vital statistics from the State Health Department. Essentially the Demographic Model is calibrated to simulate the component changes in population which occurred between the 1970 U.S. Census and the 1974 Census Update and to project these changes into the future based upon a forecast of future housing construction. The model goes through the following steps:

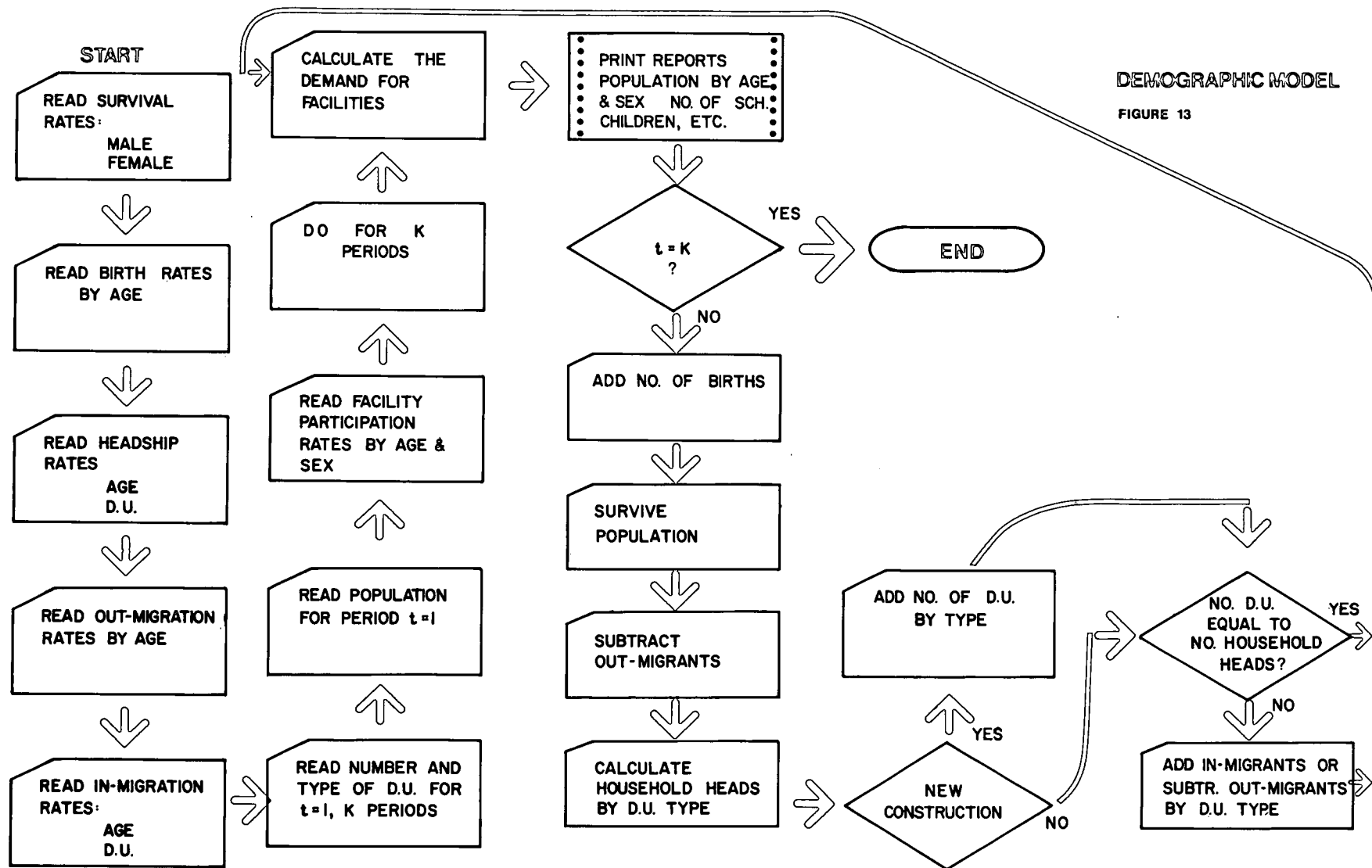
- (1) Add Number of Births - Starting with a base year population a projection is made

of number of births that will likely occur over a 5-year period by women aged 15-44 in 5-year cohorts.

- (2) Survive Population - Each age and sex cohort is moved 5 years into the future with the number of births assigned to the 0-4 cohorts and a projected number of deaths subtracted for all age and sex cohorts.
- (3) Subtract Out-migrants - Out-migration within the model's structure is defined as an estimate by age and sex of the number of persons who will move from their base period dwelling units during a 5-year period. For projection purposes we are interested in the number of persons who remain in their dwelling; hence, the actual rates used within the model estimate "non-movers." The demographic literature contains numerous articles on the correlation between migration and age. The close relationship between the two is well documented.<sup>1</sup> Gross statistics on mobility are often misleading since the "average" resident has different characteristics than the typical mover. While significant movement occurs at each age group under age 70, most of the moving takes place in the young adult age groups. In terms of structure type, most of the movement occurs within the apartment unit stock since this is the preferred housing for

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<sup>1</sup> For a recent article see: Donald B. Pittenger, Journal of the American Institute of Planners, July 1974, pages 278-283.



young adults. As a person reaches approximately age 30, mobility decreases and the probability of residing in a single-family home increases. With children, mobility is of course related to the age of their parents.

During the model's development stage we considered using separate out-migration rates for those living in single-family vs. multi-family units. The major drawback would have been in the model's calibration. Since age and sex data for the 1970 Census is not cross-classified by structure type, there would be no way of testing the model's predictive ability.

- (4) Calculate the Number of Household Heads - New Construction - The 1974 Census Update Survey shows that there is a very close relationship between age of household head and preference for dwelling unit type as stated above. After out-migration occurs, the number of multi-family and single-family household heads remaining is compared to the number of units by structure type in the housing stock. Since the population has aged since the base period, the model allows for some additional mobility to that which occurs in (3).

The probability of being a household head is a function of age and the percentage mix of units in the housing stock. For the County as a whole the housing stock is already so large that the dwelling unit mix will not change greatly in the next 10 years. The probabilities were specified in this manner so that the model could be

applied to planning areas and other small areas which have all or almost all of their dwellings of one type. For example, if a community has only single-family dwellings then the probability of being a multi-family head is zero regardless of age. The model adjusts the probabilities of being a household head by interpolating between one set of rates which represents the 67% single-family ratio found in 1974 and the rates obtained by estimating the proportion of heads by age of occupants of a particular structure type.

#### HOUSEHOLD HEADS BY AGE 1960, 1970, 1981, 1986

	1960	1970	1981	1986
Under 30	9,718	25,743	31,954	36,145
30-44	41,988	51,639	65,512	74,485
45-64	31,650	62,354	81,045	86,954
65+	9,077	16,937	34,370	44,716
TOTAL	92,433	156,673	212,881	242,300

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SOURCE: 1960 Estimated by MCPB Staff, U.S. Census  
1970 U.S. Census  
1981 and 1986 Projections MCPB Staff

- (5) Add In-migration or Subtract Out-migrants - In the usual case the model will find that after survival and out-migration there is an excess of dwellings over the numbers of household heads. In-migrants to either single-family or multi-family units are estimated using data from the Census Update Survey.
- (6) Print out population by age and sex for a period 5 years in the future.

## SECTION 4 - POPULATION AND HOUSEHOLD FORECAST 1976-1986

### POPULATION FORECAST

Utilizing the most recent data on economic and demographic trends, we anticipate a population growth for Montgomery County of approximately 97,000 persons by 1986. This would amount to a total population of 687,000 by January, 1986. The projected average annual growth is 47 percent less than the annual rate of 18,200 experienced during the 1960 to 1970 period, and 14 percent less than the 11,200 rate experienced during the first 6 years of the 1970's. The annual growth rate is expected to average 1.6 percent as compared to 4.4 percent for the 1960's and 7.6 percent for the 1950's. Within the 10-year period population growth can be expected to vary significantly around the average annual rate due to short run cycles. For the first time we have divided the 10-year forecast period into two 5-year periods to make explicit our judgment that growth will rebound from the current record low levels after 1980. In addition, we are more certain of the magnitude of growth which will occur during the next 5 years than in the second period, since growth through 1980 will be more influenced by current conditions than will growth in the later period.

During the next 5-year period total population is expected to grow by only 29,000 persons, or 5,800 on an average annual rate. However, growth will also fluctuate within this short time span since residential construction is currently just rising from the low point of 1975. Average household size in the existing population is undergoing a steep decline as young adults leave home for college, marriage, and to otherwise

form new households. The population equivalent of over 2,000 occupied dwelling units is required to offset declines in the average number of persons per unit in the existing housing stock.

### GROWTH IN POPULATION VERSUS GROWTH IN DWELLING UNITS

Figure 14 attempts to show why it is misleading to take the projected increase in population and divide by the increase in dwelling units. The actual determinants of net population growth are much more complex and include projections of future fertility, mortality, and headship rates as well as the type of dwelling units projected. The line showing the projected effect of average household size decline in the 1975 population decreases at a decreasing rate.

The 5,800 per year average annual increase in population for the 1976-1981 period is a net increase. The number of people moving into the 4,300 newly constructed dwelling units will number approximately 12,100 per year. However, to project the actual increase in total population it is also necessary to project changes in the population in the existing stock of dwelling units. The current structure of the Montgomery County population is such that fewer persons will live in the existing stock of dwelling units by 1981 than do today. This decline in "average household size" will be caused by young persons leaving home, divorce, mortality, and the low birth rate. The Demographic Model projects a 5.6% decline in the County's average household size over the next 5 years--this is less than the 8.1 percent decline from 1970 to 1975. Applying this percentage decline in average household size, we estimate that there will be a decline in population of approximately 6,300 persons per year in the existing housing stock. This decline will be more than offset by number of persons moving into new

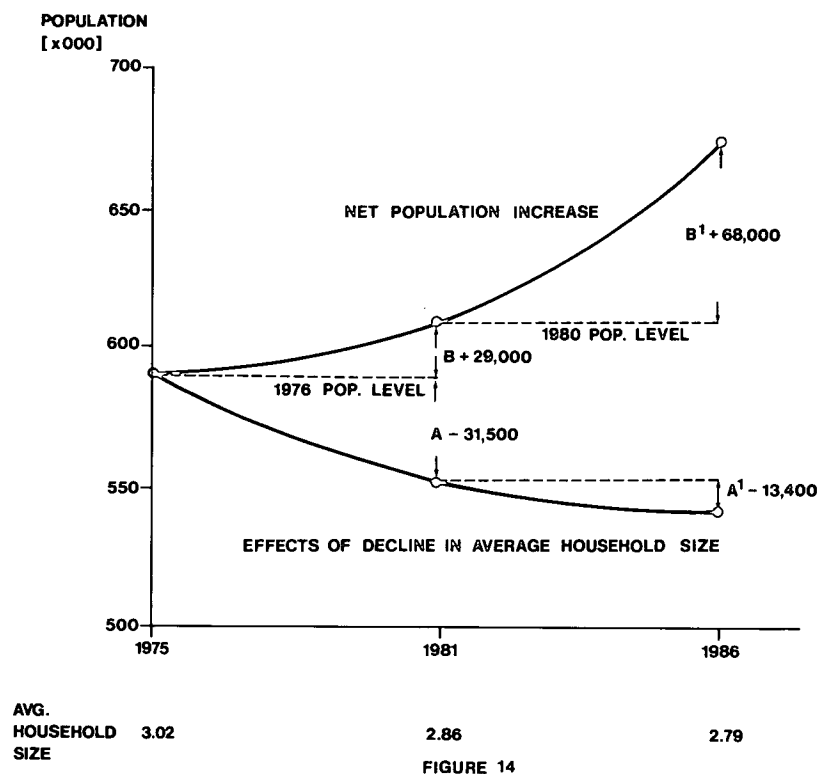
dwelling units so that total population is forecast to increase by 5,800 per year.

During the 1981-1986 period the decline in average household size will be less (2.5%) and the construction rate higher, so the ratio of net population increase to dwelling unit increase will be higher. Declines in average household size will be less severe in the 1980's since the impact of a rapidly declining birth rate in the 1960's and early 1970's will be less pronounced. The smaller projected decline of from 2.86 to 2.79 by 1986 would only lower the population in existing dwelling units by an additional 13,400. Line segments B and B<sup>1</sup> show the projected net population increments for each 5-year period. The combined segments A + B and A<sup>1</sup> + B<sup>1</sup> approximate the number of persons moving into new dwelling units during each period.

#### HOUSEHOLD GROWTH

Household growth will significantly outpace population growth during the next 10 years. Between 1976 and 1986 the forecast is for a 26.7 percent increase in dwelling units, from 195,959 units to 245,500 units, compared to a 16.4 percent increase in population. While this is a continuation of a basic long-term trend, the pace of household growth over population growth has recently taken a sharper upward movement both here and nationally. The higher rate of household growth over population growth is resulting in a dramatic decline in average household size. The average size of households in Montgomery County declined from 3.30 in 1970 to 3.06 in 1974, or by more than 7 percent in only 4 years. The significance of this decline is readily understood when compared to the 10 percent decline experienced during the 10 years from 1960 to 1970. If the decline in average household size had remained at the 1960-1970 rate, the 1976 Montgomery County population would be higher by 16,000 persons. If average household size had remained at the 1970 level,

ANALYSIS OF THE COMBINED EFFECTS OF  
PROJECTED CHANGES IN AVERAGE HOUSEHOLD SIZE  
AND NEW CONSTRUCTION ON NET POPULATION GROWTH  
1976-1986 FORECAST, MONTGOMERY COUNTY



the 1976 population would be higher by over 50,000 persons.

During the 1976-1981 period both market and sewer moratorium conditions will favor residential construction growth in the I-270 Corridor. The Corridor will receive 39.5 percent of Countywide forecast increase of 21,500 dwelling units and 71.7 percent of the County's population growth. The Urban Ring will receive 26.0 percent of the County's housing growth, but most of this will occur in the Rossmore retirement community. In the Urban Ring the population expected from new units will not be sufficient to offset population loss due to declining average household size, and total population is expected to fall by 6,000. Olney and Potomac will account for 20 percent of the housing increase and 16.5 percent of the population growth. The rural areas will receive the remaining 8 percent share of residential construction and 11.8 percent of the forecast population growth.

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During the second 5-year period the sewer moratorium is expected to be fully lifted and the market supply constraints which make apartment construction largely infeasible should relax. These changes, along with the opening of Metro, are expected to shift a larger percentage of growth to the Urban Ring. Population growth from a projected 13,500 dwelling units between 1981 and 1986 will result in the Urban Ring receiving a 19.5 percent share of the total County population growth for the 10-year period. The I-270 Corridor will receive the second largest 10-year share of construction, or 31.9 percent of the new housing units, and 47.3 percent of the population growth. Potomac will follow with a 10.1 percent share of new dwelling units projected and 8.2 percent of the population growth. Olney will remain an attractive single-family market area although its planned population capacity will be reached. Olney will receive 7.6 percent of the housing

and 11.3 percent of the population growth. Colesville will benefit from increased apartment construction during the second 5 years and will receive 7.5 percent of the 10-year housing growth and 4.4 percent of the population change. The rural areas are expected to receive the remaining 6.5 percent of the 10-year residential growth and 8.9 percent of the population growth. During the second 5-year period increased competition from other parts of the County and limited planned capacity will result in a decline in the percent share of growth in the rural areas.

#### HIGH AND LOW PROJECTION SERIES

This year we are including a High and Low projection series in order to attach a confidence interval to the Forecast rate of growth. This procedure is similar to that used by the U.S. Census except that the Census does not commit itself to the reasonableness of their three projections. The Forecast is consistent with the regional projections which resulted from the COG Cooperative Forecasting Process (discussed in Section 3), and represents our projection of the most likely future given current information. This includes the assumption that the metropolitan area will grow at a slower rate consistent with less growth in the Federal sector, more out-migration from the area consistent with national trends away from major metropolitan areas, especially in the Northeast, and a drop in the local housing market, particularly for multi-family dwellings due to high interest rates and construction costs.

The high projection for Montgomery County assumes that the construction of housing units in the future will closely approximate the boom years of 1965 to 1974 when approximately 72,000 dwellings were constructed. A corollary to this assumption is that the metropolitan area economy will continue to grow, the Federal Government and related activities will continue to

TABLE 5

POPULATION AND HOUSING UNIT GROWTH FORECAST  
MONTGOMERY COUNTY, 1976-1986  
BY FORECAST AREAS

Forecast Areas	1976 Estimates		Growth 1976-1986		Percent Share of County Growth			
	Popula- tion	Housing Units	Popula- tion	Housing Units	1976 - 1981 Popula- tion	1976 - 1981 Housing Units	1976 - 1986 Popula- tion	1976 - 1986 Housing Units
I-270 Corridor	62,300	20,654	46,000	16,750	71.7	39.5	47.3	31.9
Urban Ring	392,400	135,520	19,000	19,130	*	26.0	19.5	36.4
Olney	23,700	6,642	11,000	4,000	10.2	7.4	11.3	7.6
Potomac	42,200	11,373	8,000	5,300	6.3	12.6	8.2	10.1
Colesville	45,600	14,676	7,300	3,950	*	6.5	4.4	7.5
Damascus	14,300	4,156	4,800	1,920	7.1	4.8	4.9	3.7
Poolesville	9,500	2,938	3,900	1,450	4.7	3.2	4.0	2.8
Total County	590,000	195,959	97,000	52,500	100.0	100.0	100.0	100.0

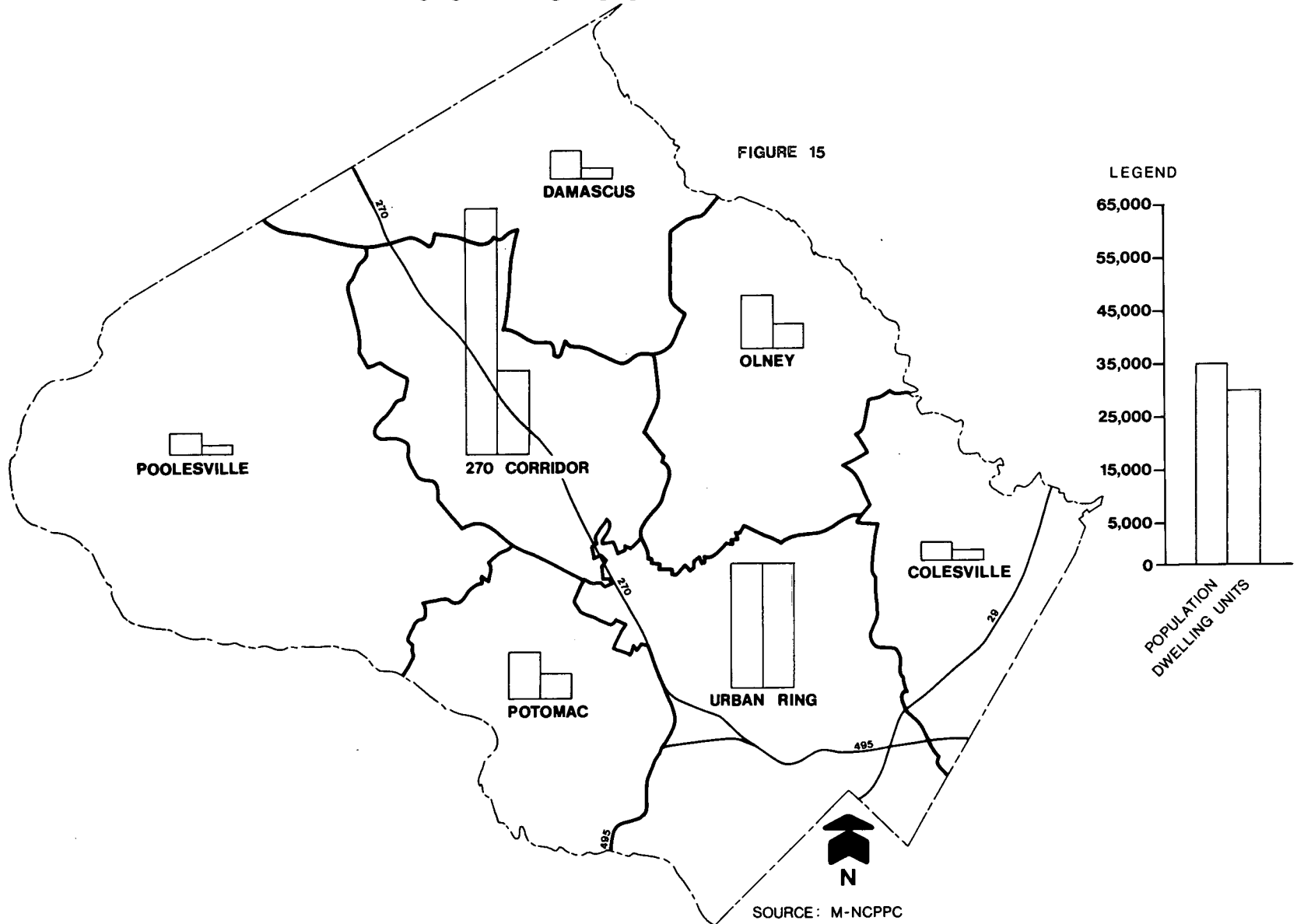
\*Due to declining average household size the following areas will lose population during the 1976-1981 period:  
 Urban Ring - 6,000 loss  
 Colesville - 1,400 loss

SOURCE: Montgomery County Planning Board



# POPULATION AND DWELLING UNIT INCREASE 1976-1986 BY GROWTH FORECAST AREAS

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expand, and Montgomery County will capture a major share of regional growth because it offers an attractive residential location and is a growing employment center. Enough sewer capacity would be available through interim plants and later through the AWT to accommodate a high level of growth.

The low projection simulates into the future the restrained economic conditions which occurred at the time of the 1974 national recession, and which have been only partially mitigated by the current recovery. These include only sluggish growth in the Federal sector and the rest of the regional economy, high or rising interest rates, failure of the County to capture its traditional share of growth, and a high rate of out-migration. This is intended to represent the minimum growth likely to occur over the next 10 years.

#### THE AGE AND SEX STRUCTURE OF THE POPULATION

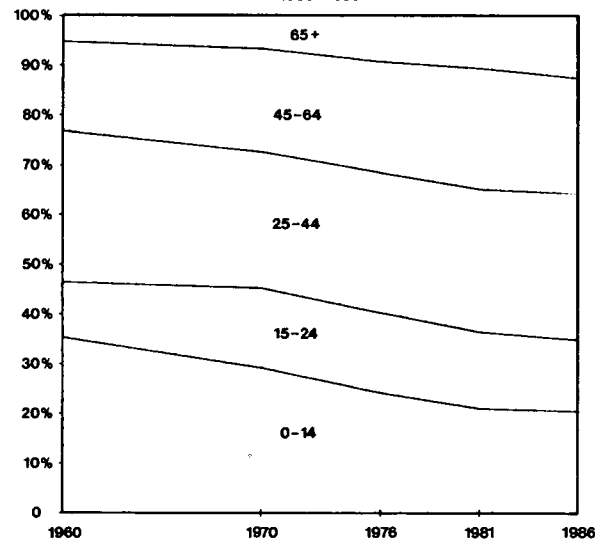
The Demographic Model, which uses 1974 Census Update Survey results, has improved the ability of the Research Division to make current estimates and future forecasts of the population structure by age and sex. For planning purposes the analysis of the changing structure of the population is in many ways more useful than estimates of the total population or the number of households. At different ages our demands for both public and private services vary as our activity patterns change. The separate demands for schools, libraries, and medical services by different age groups are often more obvious than housing preferences, job requirements, leisure time activity and the probability of committing a violent crime, which also vary by age.

Methodology - This year's Forecast includes an analysis and forecast of the age and sex distribution of the Countywide population to 1981 and 1986. A forthcoming document will provide planning area forecasts

for the same time period. The projections are based upon assumptions of what the course of demographic events will be over the present decade and on projections of total population and households included in the Forecast. The Demographic Model which was used to make the Forecast is explained in Section 3 of this report.

Analysis of Changes in the Age and Sex Structure, 1976-1986 - The following discussion is focused on the data in Table 6 and Figure 16 which show the changing age structure from 1960 to the present and a forecast to 1986 for selected age groups. Table 7 gives a more complete distribution of the population by age and sex in 5 year intervals (cohorts). The population pyramids in Figure 18 show the changes that have occurred in the age and sex profile since 1970 and which will likely occur through 1986.

CUMULATIVE DISTRIBUTION OF POPULATION BY AGE GROUPS  
MONTGOMERY COUNTY  
1960-1986



SOURCE: MONTGOMERY COUNTY PLANNING BOARD

FIGURE 16

GENERAL FERTILITY RATE (ANNUAL BIRTHS PER 1000 FEMALES AGED 15-44)  
UNITED STATES AND MONTGOMERY COUNTY, MARYLAND

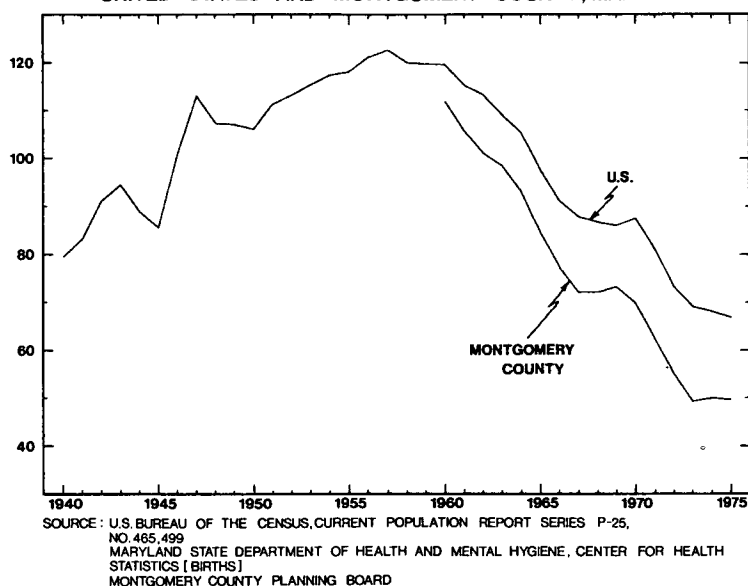


FIGURE 17

The Population Under 15 Years of Age - Changes in total population often contrast greatly with changes in various age groups, due largely to past changes in fertility and net-migration characteristics. For example, between April, 1970 and April, 1976 the population under age 15 declined by 6.4 percent, while total population increased by 12.3 percent. This phenomenon was not unique to Montgomery County since the Nation as a whole experienced a similar decline of 10.0 percent for the same age group. In 1960 this group accounted for approximately 35 percent of the Montgomery County population but by 1970 it had declined to 30 percent. By 1986 the under-15- year-old group's share of total population will decline to 21.2 percent from the current 24.0 percent. Changes both in the numbers and location of the child population will continue to create serious problems in the administration of schools and changes in the demand for the goods and services consumed by the younger age groups.

The decline in the birth rate which is responsible for the fall in the number of persons in the younger age groups can be seen in Figure 17. The number of births recorded by Montgomery County residents was 22 percent less in 1973 than in 1970 -- 6,400 vs. 8,200 -- although the number of women of childbearing age increased by 14 percent. The impact of the low birth rate on the number of children under 5 years old is somewhat offset by in-migration. From 1970 to 1974 the County experienced an in-migration of approximately 1,700 children per year under age 5. This was due to the large number of in-migrants between the ages of 25 and 34. However, during the same period, the low levels of net-migration by persons 35-44 brought very few net-migrants into Montgomery County between the ages of 5 and 14. This contrasts with the 1960's when 26.0 percent of our net-migrants were 35-44 and 26.6 percent were between 5 and 14. The size of the 35-44 age cohort has declined nationally since 1970.

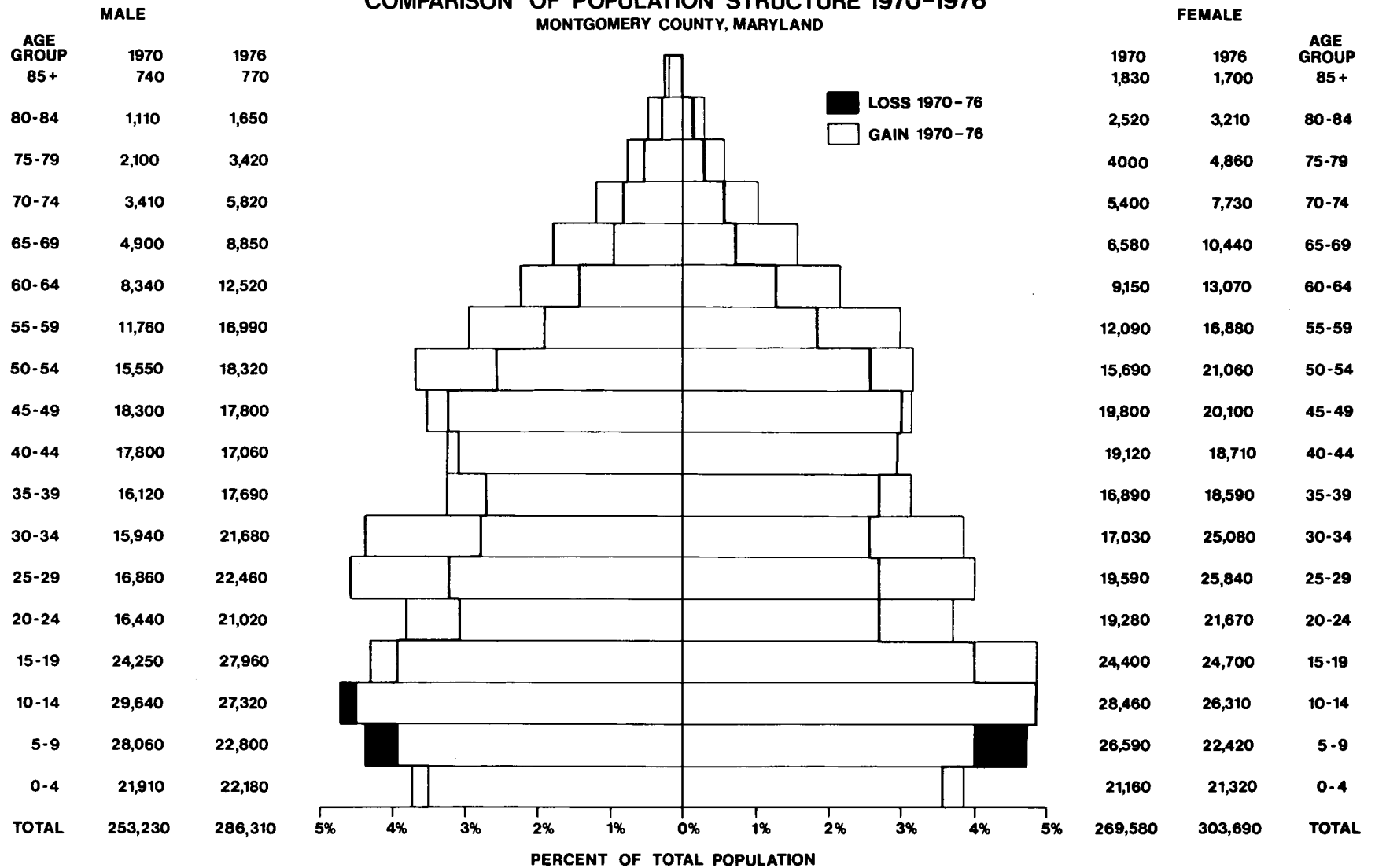
TABLE 6  
CHANGES IN POPULATION STRUCTURE  
AGE GROUP SUMMARY, 1960-1986  
MONTGOMERY COUNTY

Age Groups	1960		1970		1976		1981		1986	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0- 4	42,299	12.4	43,074	8.2	43,500	7.3	42,250	6.8	48,170	7.0
5-14	79,701	23.4	112,707	21.6	98,850	16.7	91,500	14.8	97,420	14.2
15-24	36,496	10.7	84,387	16.1	95,350	16.2	93,550	15.1	95,200	13.8
25-34	45,128	13.2	69,402	13.3	95,060	16.1	97,700	15.8	110,690	16.1
35-44	58,623	17.2	69,943	13.4	72,050	12.3	80,280	13.0	91,800	13.4
45-64	60,718	17.8	110,677	21.2	136,740	23.2	149,180	24.1	159,730	23.3
65 +	17,963	5.3	32,619	6.2	48,450	8.2	64,540	10.4	83,990	12.2
All Ages	340,928	100.0	522,809	100.0	590,000	100.0	619,000	100.0	687,000	100.0
15-64	200,965	58.9	334,409	64.0	399,200	68.0	420,710	68.0	457,420	67.0
Median Age	28.3		27.9		30.9		33.4		34.3	

SOURCES: 1960 and 1970, U.S. Census of Population; 1976, 1981 and 1986, Projections by Staff,  
Montgomery County Planning Board

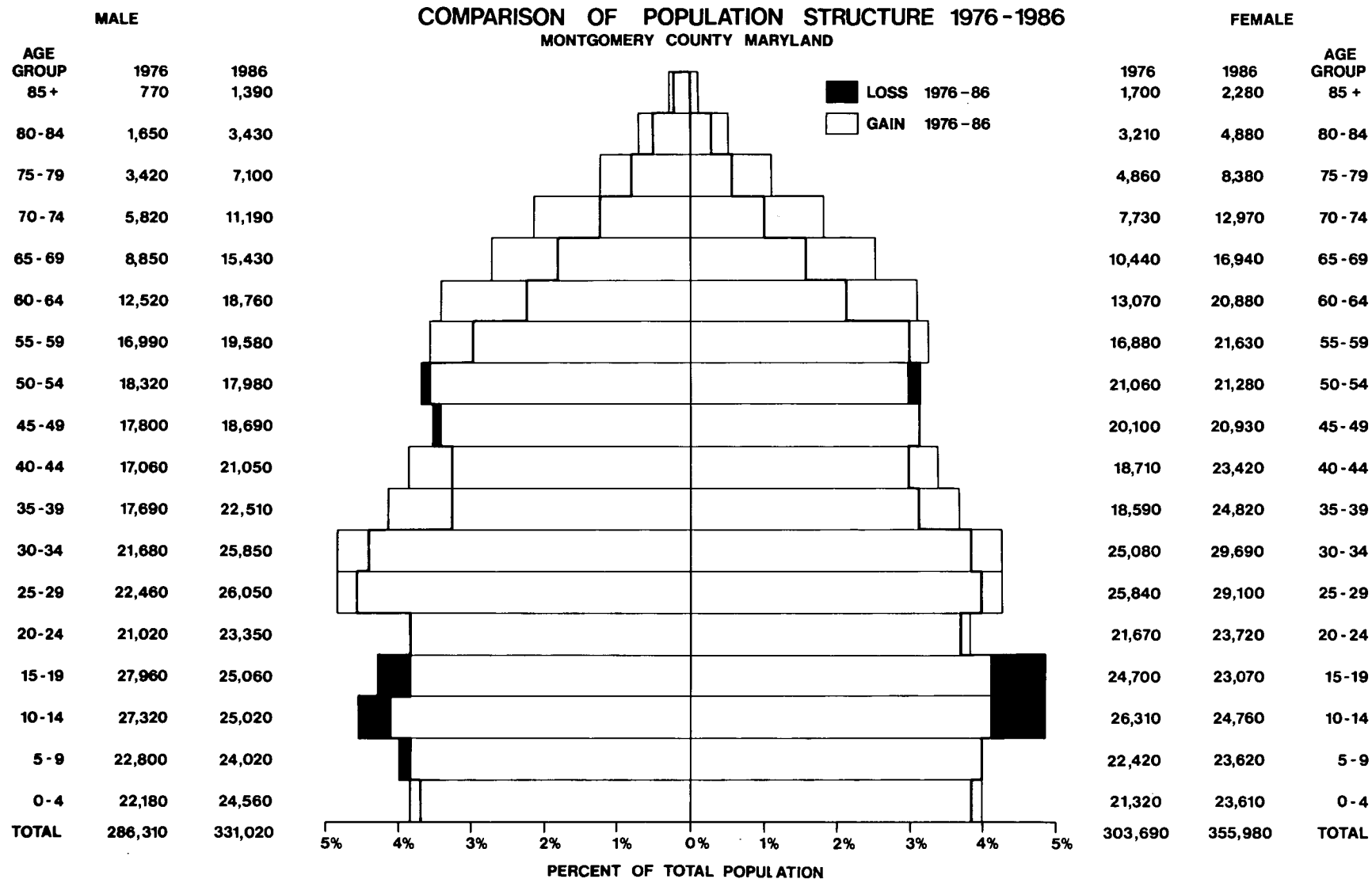
# COMPARISON OF POPULATION STRUCTURE 1970-1976 MONTGOMERY COUNTY, MARYLAND

34



SOURCE: MONTGOMERY COUNTY PLANNING BOARD

FIGURE 18 A



SOURCE: MONTGOMERY COUNTY PLANNING BOARD

FIGURE 18<sup>B</sup>

Significant in-migration in this age group and, therefore, increased in-migration of their children in the 5-14 age group is not expected until around 1980.

The Age Group 15-24 - In January, 1976 the population 15 to 24 years of age, which includes most high school and college students, accounted for about 16.2 percent of the total Montgomery County population. This was an increase from the 16 percent share in 1970 and the 11 percent share in 1960. However, the size and relative proportion of this age group is beginning to taper off and will begin to decline in size by 1980 as those who were born during the beginning of the "baby bust" years in the late 1950's replace those born in the "baby boom" years after 1945.

36 A decline in the population under age 15 is consistent with the fall in average household size, so is the proportionate increase in the population 15-24. Individuals aged 15-24 begin to leave home for college, marriage, and to otherwise form new households. Montgomery County has experienced net out-migration in this age group since 1970. We conclude that this is primarily due to college enrollment since the level of net in-migration for the age group 25-29 is several times greater than the out-migration of the 15-24 age group.

Young Adults, 25-34 - Since 1970 the number of young adults 25-34 years of age grew by 25,700 or 37 percent in Montgomery County. This is the most highly mobile age group. In-migration of those 25-34 is closely tied to local and regional employment growth, and the location of "starter" single-family homes. In-migration of this age group will be moderate over the next 5-year period due to slowed employment growth and housing competition with jurisdictions having lower-priced single-family homes. After a time the size of this age group will also be affected by the lower birth rate. The size of this age group will actually begin to decline at the national level after 1990.

age group will actually begin to decline at the national level after 1990.

Persons Aged 35-44 - The size of the age group 35-44 grew slowly from 1970-1976 at approximately 7,350 persons per year. For the United States as a whole the cohort grew by only 2.5 percent. The low level of in-migration of this age group was the primary reason why Montgomery County experienced little net in-migration of school-age children since 1970. During the 1960's this group was relatively more important as a percentage of the labor force and Montgomery County experienced significant in-migration of children of family heads between 35-44. The age group will begin to grow both here and nationally in the next 5 years with an acceleration by the late 1980's, as many of those born during and after World War II will be in their mid- to late-thirties. As this group grows, the demand for single-family detached homes and townhouses will increase. The growth in this age group is a major reason for the current high level of demand for less expensive "starter" homes. When this age group first entered the housing market its great size stimulated a high demand for rental apartments. As these persons leave apartments for larger dwellings, they help to reduce the problem of supplying apartments to the next age group.

The Middle-Aged Population, 45-64 - Persons 45-64 years of age are in the prime of high income ages in the working force. The number of persons in this age group will increase faster than total population over the next 5 years -- 9 percent compared to 5 percent. This should have a positive fiscal effect on Montgomery County. However, the size of this age group will grow at only half the rate of total population from 1981 to 1986 -- 7 percent compared to 11 percent for the total population.

The Elderly Population - In 1974 those over 65 years of age outnumbered those under 5 in Montgomery County for the first time. While this group can be expected to increase both in absolute number and in percentage terms beyond the Forecast span of 10 years, Montgomery County's share of elderly persons is less than that of the country as a whole -- 8.2 percent compared to 10.6 percent. The County's elderly population will not reach 10 percent until after 1980. The County's median age is greater than that of the Nation -- 30.9 vs. 28.9 -- but this is because the County's population has a greater share of persons in the middle of the age pyramid rather than at the end. Past in-migration of household heads in the prime working ages is the principal reason for the greater share of those between the ages of 35 and 65 in Montgomery County -- 35.5 percent vs. 31 percent for the Nation.



TABLE 7

POPULATION FORECAST FOR MONTGOMERY COUNTY  
BY AGE AND SEX, 1976-1986

Age Group	1976			1981			1986		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
0-4	21,320	22,180	43,500	20,710	21,540	42,250	23,610	24,560	48,170
5-9	22,420	22,800	45,220	21,830	22,240	44,070	23,620	24,020	47,640
10-14	26,310	27,320	53,630	23,590	23,840	47,430	24,760	25,020	49,780
15-19	24,700	27,960	52,660	23,570	26,490	50,060	23,070	25,060	48,130
20-24	21,670	21,020	42,690	21,390	22,100	43,490	23,720	23,350	47,070
25-29	25,840	22,460	48,300	25,230	22,460	47,690	29,100	26,050	55,150
30-34	25,080	21,680	46,760	27,060	22,950	50,010	29,690	25,850	55,540
35-39	18,590	17,690	36,280	22,180	20,200	42,380	24,820	22,510	47,330
40-44	18,710	17,060	35,770	19,700	18,200	37,900	23,420	21,050	44,470
45-49	20,100	17,800	37,900	19,460	17,070	36,530	20,930	18,690	39,620
50-54	21,060	18,320	39,380	21,200	17,880	39,080	21,280	17,980	39,260
55-59	16,880	16,990	33,870	21,040	19,330	40,370	21,630	19,580	41,210
60-64	13,070	12,520	25,590	16,830	16,370	33,200	20,880	18,760	39,640
65-69	10,440	8,850	19,290	13,310	11,910	25,220	16,940	15,430	32,370
70-74	7,730	5,820	13,550	10,300	8,460	18,760	12,970	11,190	24,160
75-79	4,860	3,420	8,280	6,410	5,040	11,450	8,380	7,100	15,480
80-84	3,210	1,650	4,860	3,780	2,390	6,170	4,880	3,430	8,310
85 +	1,700	770	2,470	1,950	990	2,940	2,280	1,390	3,670
Total	303,690	286,310	590,000	319,540	299,460	619,000	355,980	331,020	687,000

SOURCES: Estimates and projections by staff of Montgomery County Planning Board.

## SECTION 5 - POPULATION AND HOUSEHOLD FORECAST FOR LOCAL AREAS 1976 - 1986

### DEMOGRAPHIC PROFILE OF MONTGOMERY COUNTY BY LOCAL AREAS

The following discussion draws on information from the 1974 Montgomery County Census Update Survey identifying the location, the characteristics and changes in the population since the 1970 Census of Population. They reflect County resident life styles in terms of housing and locational preferences, employment and commuting as well as family structure and income levels.

Forecasts of the future are based on changes which will occur naturally to the existing population (e.g. aging, births and deaths) as well as estimates of the number of people who will move out of--or into--the County. It is this latter component which is most difficult to estimate and which depends to a large extent on the economic health of the community and the availability of appropriate housing to accommodate those attracted to the area. Nevertheless, the 1974 profile of the population yields insights into the life style of County residents, i.e., housing preferences, locational decisions, employment and job commuting, income, etc., adjusted by national and regional trends, which form the basis for future forecasts of population change. In recognition of the Survey's significance in the forecasting process, the Montgomery County Planning Board will conduct a second Census Update Survey in April, 1977.

### TRENDS IN HOUSEHOLD AND POPULATION GROWTH: 1970-1974

Between 1970 and 1974 the percentage increase in Montgomery County household formations exceeded

total population (19 percent and 10.5 percent, respectively). This trend is visible in all forecast areas of the County where increases in household formations were general and population growth trailed household increases.

Areas in the Urban Ring experienced the smallest increase in household formations (9 percent), at the same time total population remained virtually unchanged from 1970. Colesville with an increase of 20 percent in households and a 9 percent population growth closely followed the County average performance over this period. All other areas recorded increases in households and population well above the average with Olney and I-270 Corridor more than doubling their 1970 household and population totals, and Potomac reporting a 50 percent increase. The I-270 Corridor has replaced Colesville as the area with the largest population outside of the Urban Ring.

Accompanying the more rapid expansion in households was a decline in average household size. In 1970 the County averaged 3.30 persons per household; in 1974 only 3.06 or a decline of over 7 percent. Declines in household size prevailed in all areas, with declines in Olney, Rockville and Bethesda most pronounced. (See Table 8.) The average size of households in Potomac declined slightly from 1970 (less than 1 percent) and in the I-270 Corridor the decline was a more moderate 6 percent.

The average size household in Potomac at approximately 4 persons per household is the highest in the County, whereas Bethesda and Wheaton-Silver Spring with 2.73 and 2.83 have the fewest persons per household. It is interesting to note that the relative rankings of areas by average household size remain unchanged from 1970 except for the juxtaposition of Olney and the Rural area, as follows:

TABLE 8

## HOUSEHOLD POPULATION, BY FORECAST AREA: 1970-1974

Forecast Area	Number of Households			Population		
	1970 <sup>a/</sup>	1974	% Change <sup>b/</sup>	1970 <sup>a/</sup>	1974	% Change <sup>b/</sup>
A. Households and Household Population						
Urban Ring	122,224	132,900	9	390,248	387,200	-*
Whtn-Sil.Spr.	59,490	62,100	4	181,995	175,900	-3
Rockville	33,995	38,700	14	121,020	123,700	2
Bethesda	28,739	32,100	11	87,233	87,600	*
Potomac	6,829	10,400	52	27,582	41,500	50
Colesville	11,439	13,700	20	41,166	45,100	9
I-270 Corridor	7,891	17,100	117	26,485	54,100	104
Olney	2,685	6,500	141	10,504	22,100	111
Rural	4,840	6,400	32	18,198	22,000	21
B. Average Household Size						
Urban Ring	3.19	2.91	- 8.8			
Whtn-Sil.Spr.	3.06	2.83	- 7.5			
Rockville	3.56	3.19	-10.4			
Bethesda	3.04	2.73	-10.2			
Potomac	4.04	4.01	- 0.7			
Colesville	3.60	3.30	- 8.3			
I-270 Corridor	3.36	3.16	- 6.0			
Olney	3.91	3.42	-12.5			
Rural	3.76	3.46	- 8.0			

<sup>a/</sup> Source: Special tabulations from Metropolitan Washington Council of Governments: 1st Count 1970 Census Summary tapes. Excludes those in group quarters. Also excluded are 639 household heads with 2,239 individuals not classified by jurisdiction.

<sup>b/</sup> Calculated from unrounded estimates.

\* Less than 1 percent

Note: Detail may not add to total due to rounding.

## RANKING (FROM HIGH TO LOW) OF AREAS BY HOUSEHOLD SIZE

	1970	1974
Potomac	1 (4.04)	1 (4.01)
Olney	2 (3.91)	3 (3.42)
Rural	3 (3.76)	2 (3.46)
Colesville	4 (3.60)	4 (3.30)
Rockville	5 (3.56)	5 (3.19)
I-270 Corridor	6 (3.36)	6 (3.16)
Wheaton-		
Silver Spring	7 (3.06)	7 (2.83)
Bethesda	8 (3.04)	8 (2.73)

Continued increases in household formations will undoubtedly exacerbate pressures for increased housing units despite the slower growth in population. The decline in household size may signal a possible change in attitudes about future housing requirements arising from changing living styles, e.g. declining marriages, shrinking family size, young adults leaving parents' homes and living alone or sharing living quarters with unrelated individuals, and the increase in the number of older persons who prefer to live apart from their adult children.

## CHANGES IN POPULATION CONCENTRATION BY AREAS: 1970-1974

As a result of the variations in growth patterns among the areas, the proportion of households and population residing inside the Urban Ring has decreased. (See Table 9). In 1970 the Urban Ring contained over 78 percent of the households and 76 percent of the population, by 1974 the comparable percentages were 71 and 68. The share of households and population in the I-270 Corridor in 1974 had increased 4 percentage points to 9 percent of the County's resident households and population. All other areas, except Colesville, recorded

smaller percentage increases; the percentage share in Colesville remained unchanged.

#### AGE OF POPULATION, BY AREA

The median age of County residents in the Spring of 1974 was 30 years, an increase of 2 years over the 1970 Census estimate. All areas, except the I-270 Corridor, experienced an aging in population with Colesville and Bethesda rising more than the County average. The median age of the population in the I-270 Corridor at 25 years was unchanged from 1970. (See Table 10.)

The median age of residents in Bethesda at 38 years is the highest in the County, followed by Wheaton-Silver Spring, and Colesville at 30.6. In 1970 these three areas also ranked 1, 2, 3 as the areas with the highest median age. In fact, all areas retained their relative ranking by age except for the I-270 Corridor which replaced Potomac as the area with the lowest median age.

The increase in median age is due largely to the significant declines in the percentage of residents under 15 years of age in all areas, except Olney and the I-270 Corridor. These two areas, in addition to the Rural area, experienced sharp increases in the percentage of the population in the prime working age group (25-44), whereas in other areas the proportion has remained approximately unchanged or declined somewhat. Since 1970, areas in the Urban Ring (Wheaton-Silver Spring, Rockville and Bethesda) have increased their concentration of persons 65 years of age and older, with close to 12 percent in Bethesda and 6 percent in Rockville. Additionally, these three areas have a large percentage of their population in the 45-64 age group which promises a continuation of this trend.

#### RELATIONSHIP OF HOUSING STRUCTURE TO AREA CHARACTERISTICS

Population characteristics of areas reflect, in large

TABLE 9  
CHANGES IN AREA SHARE OF HOUSEHOLDS AND POPULATION,  
BY FORECAST AREA: 1970-1974

Forecast Area	Households (%)			Population (%)		
	1970 <sup>a/</sup>	1974	Change	1970 <sup>a/</sup>	1974	Change
Montgomery Co.	100.0	100.0	-	100.0	100.0	-
Urban Ring	78.4	71.1	-7.3	75.9	67.7	-8.2
Whtn-Sil.Spr.	38.2	33.3	-4.9	35.4	30.8	-4.6
Rockville	21.8	20.7	-1.1	23.5	21.6	-1.9
Bethesda	18.4	17.2	-1.2	17.0	15.3	-1.7
Potomac	4.4	5.5	+1.1	5.4	7.3	+1.9
Colesville	7.3	7.3	-	8.0	7.9	-0.1
I-270 Corridor	5.1	9.2	+4.1	5.2	9.5	+4.3
Olney	1.7	3.4	+1.7	2.0	3.9	+1.9
Rural	3.1	3.5	+0.4	3.5	3.8	+0.3

<sup>a/</sup> Source: Special tabulations from Metropolitan Washington Council of Governments: 1st Count 1970 Census Summary tapes. See footnote <sup>a/</sup> Table 8.

TABLE 10

POPULATION AGE PROFILE: 1974-1970<sup>a</sup>/BY AREA

Area/Year	Total Number <sup>b</sup>	Age Distribution					Median age <sup>c</sup>
		Under 15	15-24 (Percent of Total)	25-44	45-64	65 yrs+	
Wheaton-Sil.Spr.							
1974	175,900	22.5	16.0	27.8	24.2	9.5	30.6
1970	184,281	26.5	17.5	25.6	23.0	7.4	29.3
Rockville							
1974	123,700	28.2	16.1	28.1	21.5	6.1	28.5
1970	121,916	34.6	15.2	29.5	16.4	4.3	26.5
Bethesda							
1974	87,600	19.3	14.6	24.2	30.1	11.8	38.2
1970	88,810	24.5	15.8	23.0	28.0	8.7	34.5
Potomac							
1974	41,500	32.6	16.8	26.2	20.9	3.5	26.1
1970	27,436	37.4	13.1	28.1	18.6	2.8	24.0
Colesville							
1974	45,100	23.5	19.9	26.6	24.8	5.2	30.6
1970	41,685	31.3	16.0	27.2	20.8	4.7	27.3
I-270 Corridor							
1974	54,100	32.8	16.8	38.6	9.3	2.5	25.0
1970	26,674	33.6	16.7	31.4	13.9	4.4	24.9
Olney							
1974	22,100	34.3	10.2	37.6	14.2	3.7	27.4
1970	10,692	35.5	13.2	27.8	17.2	6.2	25.8
Rural							
1974	22,000	25.1	17.8	35.4	18.5	3.2	27.6
1970	18,360	33.7	15.3	25.8	18.4	6.8	26.8

<sup>a</sup>/ 1970 data from special tabulation by Metropolitan Washington Council of Governments; 1st Count 1970 Census Summary tape. Includes population in group quarters and in trailers but excludes 2,239 persons not classified to any of the geographic areas.

1974 estimates rounded to nearest 100, exclude population in group quarters and trailers.

<sup>b</sup>/ 1974 population estimated to nearest 100.

<sup>c</sup>/ 1974 median calculated from 5 year age intervals; 1970 median estimate often derived from 10 year age intervals.

TABLE 11

## NUMBER OF HOUSEHOLDS AND POPULATION, BY STRUCTURE TYPE: 1974

Area	Households In-		Population In-		Average Household Size <sup>a</sup>	
	Single Family <sup>b</sup>	Multi-Family	Single Family <sup>b</sup>	Multi-Family	Single Family <sup>b</sup>	Multi-Family
Urban Ring	85,700	47,200	289,500	97,700	3.38	2.07
Whtn-Sil.Spr.	37,800	24,300	124,600	51,300	3.29	2.11
Rockville	25,600	13,100	95,400	28,300	3.73	2.16
Bethesda	22,300	9,800	69,500	18,100	3.12	1.86
Potomac	9,800	600	39,800	1,700	4.09	2.70
Colesville	10,200	3,500	36,500	8,600	3.59	2.46
I-270 Corridor	8,200	9,000	29,000	25,100	3.56	2.80
Olney	5,900	600	20,700	1,400	3.53	2.38
Rural	6,400	-	22,000	-	3.46	-

<sup>a</sup>/ Average based on unrounded estimates

<sup>b</sup>/ Includes townhouses

measure, the type of occupied housing structures. For example, the average household size of residents of single-family homes is typically much larger than those in apartments. (See Table 11.) It follows, therefore, that areas such as the I-270 Corridor which have high concentrations of multi-family units will average smaller households, and areas such as Potomac which have predominately single-family units will have larger households. Other characteristics documented in this report as well as in earlier reports in this series indicate that residents of single-family homes are usually homeowners, have higher incomes, are less prone to migrate, and have heads of households typically older than those residing in apartments.

#### FAMILY INCOME: 1969-1973 (See Table 12)

Median family income of County residents increased by over 30 percent to \$21,832 during the 4-year period 1969-1973. All areas of the County recorded increases with Potomac and Olney leading with above average increases and the Urban Ring areas trailing with below average increases. Rockville, Wheaton-Silver Spring and Bethesda with increases of 18, 24 and 25 percent, respectively, fell behind; whereas Colesville and the I-270 Corridor kept pace with the County average change.

Area rankings by median family income show that Potomac, at \$31,000, leads all areas. Bethesda and Colesville trail by approximately \$4,000 and \$6,500, respectively; in 1969 these two areas trailed by only \$1,300 and \$4,000, respectively.

The rankings of areas by income remains virtually unchanged from 1970 with the exception of the Olney area which moved ahead of Rockville to trail Colesville as the area with the fourth highest income rating. Although the number of respondents from the Rural area are too few for accurate estimations, it appears

TABLE 12

#### FAMILY INCOME BY AREA: 1969-1973

Area	Median Income		1973 Income Distribution <sup>a/</sup> (Percent)			
	1969*	1973 <sup>b/</sup>	Under \$10,000	\$10,000-\$24,999	\$25,000-\$39,999	\$40,000 or more
Urban Ring	\$16,677	\$20,400	12.2	51.8	27.3	8.7
Whtn-Sil.Spr.	14,622	18,300	15.4	55.8	23.5	5.3
Rockville	16,386	19,400	10.6	57.4	26.3	5.7
Bethesda	21,464	26,900	7.7	36.6	36.2	19.5
Potomac	22,746	31,100	2.5	28.9	46.8	21.8
Colesville	18,733	24,400	8.7	43.2	42.2	5.9
I-270 Corridor	14,102	18,300	9.8	67.1	17.8	5.3
Olney	15,697	21,900	2.3	58.8	34.9	4.0
Rural	12,622	c/	c/	c/	c/	c/

<sup>a/</sup> Income of families residing in Montgomery County in 1974.

<sup>b/</sup> Estimated to nearest \$100

<sup>c/</sup> Data suppressed due to sample size limitations. 1973 median family income estimated at over \$20,000

\* Special Tabulations from Metropolitan Washington Council of Governments: 5th Count 1970 Census Summary Tape. Data refer to residents of County in 1970.

TABLE 13

PLACE OF WORK OF EMPLOYED RESIDENTS: 1974-1970<sup>1/</sup>

Residents of:	Percent of 1974 Residents Working In:						Percent of 1970 Residents Working In:	
	Total	Mont. Inside Beltway	County Outside Beltway	Maryland (not M.C.)	D.C.	Else-where	M.C.	D.C.
Urban Ring	100.0	30.4	22.4	6.8	32.9	7.5	51.1	36.0
Whtn.-Sil.Spr.	100.0	28.8	19.4	9.4	35.6	6.8	47.7	37.7
Rockville	100.0	30.0	35.8	5.1	21.0	8.1	63.8	24.3
Bethesda	100.0	34.4	10.9	3.5	43.2	8.0	43.7	45.8
Potomac	100.0	22.1	28.2	4.6	34.8	10.3	50.9	34.6
Colesville	100.0	20.2	27.3	15.3	30.9	6.3	45.2	31.4
I-270 Corridor	100.0	23.0	52.0	3.6	14.6	6.8	78.6	10.6
Olney	100.0	21.9	37.7	8.2	24.5	7.7	na	na
Rural	100.0	24.6	50.7	8.2	9.6	6.9	na	na

<sup>1/</sup>1970 data from Census Tract Publication PHC (1) - 226

Data exclude approximately 5 percent of workers not reporting place of work. The geographic areas of Olney and the Rural areas overlap Census tract boundaries and are not directly comparable.

na = not available from Census Tract report

that the family income increase from 1970 has been significant and may have reached over \$20,000.

The U.S. Department of Labor has estimated that the cost of living (price index) has risen by close to 35 percent during this 4-year period. It would therefore appear that there has been an erosion in the purchasing power of County residents, particularly in those areas in which median income rose by less than the County average of 30 percent.

#### PLACE OF WORK OF EMPLOYED COUNTY RESIDENTS: 1970-1974

Overall, close to 55 percent of the County's employed residents worked in the County, an increase of 1.5 percent from 1970. The increase was shared by all areas except the I-270 Corridor and Potomac. (See Table 13.) In 1970 over 78 percent of the employed residents of the Corridor worked in the County; by 1974 the percentage had declined to 75. Both in 1970 and 1974 this area yielded the highest percentage of residents working in the County. In Potomac there was little change between 1970 and 1974, with approximately one out of every two resident workers employed in the County.

More than half of the resident workers in three areas--Wheaton-Silver Spring, Bethesda and Colesville--were employed outside the County. However, the in-county percentage of workers exceeded that of any single jurisdiction, including Washington, D.C. Bethesda reported the lowest percentage of in-county workers (45 percent) with an additional 43 percent traveling to jobs in the District.

County residents working in the County are almost evenly divided in job locations with respect to the Beltway delineation. However, the distribution of job location by residents of individual areas varies considerably. For example, over 50 percent of resident workers

in the Corridor and the Rural area work outside the Beltway and only 23 percent work inside the Beltway. In fact, resident workers in all areas, except Wheaton-Silver Spring and Bethesda, typically have jobs located outside the Beltway.

Although there has been a decline in the percentage of workers commuting to jobs outside of the County there has, in fact, been an increase in the absolute number of commuters. For example, the number of commuters to D.C. is estimated to have increased by about 13,000 or 19% over 1970; however, during the corresponding period the number of County residents working full or part-time in the County has increased by some 36,000 or 32 percent. As a result, the proportion of workers commuting to D.C. has declined. It is difficult to precisely measure the change in the number of commuters to the various jurisdictions due to the large number of workers (12,500) who did not report their place of work in 1970 and the Census inclusion of approximately 4,000 workers between the ages of 14 and 16. This latter category has been excluded from the Census Update Survey totals.

#### HOME AT LAST CENSUS: 1970

Residents of the County have been extremely mobile, with only 55 percent of the April 1974 households occupying the same house as during the last Census in April 1970 (or over 11 percent of the households moved each year). Of the movers, 17 percent moved from one part of the County to another and the remaining 27 percent were newcomers to the County. Households occupying single-family homes were far less mobile than those living in apartments, with almost 69 percent of the 1974 households in single-family homes occupying the same home as in 1970, and approximately 13 percent moving within the County; for those 1974 households in apartments the comparable percentages are 28 and 26, respectively.

TABLE 14

HOME AT LAST CENSUS, BY STRUCTURE TYPE: 1974

	All Households				Household Living in S.F. Home			
	Total	1970 Residence:			Total	1970 Residence:		
		Same House	Mont. Co.	Other Areas		Same House	Mont. Co.	Other Areas
Residents Of:	(Number)	Percent <sup>a/</sup>			(Number)	Percent <sup>a/</sup>		
Urban Ring	132,900	57.8	15.9	26.0	85,800	71.0	11.1	17.5
Whtn.-Sil.Spr.	62,100	58.4	14.4	26.9	37,800	72.7	10.2	16.9
Rockville	38,700	51.9	20.4	27.6	25,600	65.2	15.2	19.4
Bethesda	32,100	63.8	13.2	22.5	22,300	74.7	7.9	16.6
Potomac	10,400	52.1	17.5	30.4	9,800	54.0	17.6	28.4
Colesville	13,700	58.9	12.3	28.8	10,200	70.4	10.4	19.2
I-270 Corridor	17,100	18.3	33.3	48.2	8,200	28.4	29.8	41.4
Olney	6,500	32.8	35.2	32.0	5,900	34.5	33.4	32.1
Rural	6,400	52.0	27.4	20.6	6,400	52.0	27.4	20.6

<sup>a/</sup> Percentages are based on unrounded estimates. They may not add to 100.0% due to omission of those not reporting place of residence during the 1970 Census.



TABLE 15

MONTHLY GROSS RENT PAID, BY AREA: 1974-1970

<u>Area</u>	<u>Total</u>	<u>Rent Payments: 1974</u>				<u>Median Rent</u>	
		<u>Under</u> <u>\$150</u>	<u>\$150-</u> <u>199</u>	<u>\$200-</u> <u>249</u>	<u>\$250 +</u>	<u>1974</u>	<u>1970<sup>a/</sup></u>
		(Percent of Renter Households)					
County: Total	100.0	9.8	24.1	34.4	31.7	\$223	\$172
Wheaton-Sil.Spr.	100.0	16.9	31.4	28.9	22.8	\$203	\$164
Rockville	100.0	6.5	23.0	40.2	30.3	225	177
Bethesda	100.0	18.0	24.7	19.6	37.7	219	185
I-270	100.0	5.7	17.9	41.7	34.7	232	166
Colesville	100.0	1.0	10.4	39.8	48.8	249	183
Potomac	na	na	na	na	na	na	190
Olney	na	na	na	na	na	na	125
Rural	na	na	na	na	na	na	130

<sup>a/</sup> Source: Special tabulations of 5th Count 1970 Census Summary tape from the Metropolitan Washington Council of Governments.

na - not available

Residents of Bethesda apparently were least inclined to change their residence, with close to 64 percent of the households remaining in the same home; for those living in single-family homes the percentage was 10 points higher. (See Table 14.) In addition to Bethesda, households in Wheaton-Silver Spring and Colesville exceeded the County average of non-movers. Of areas with the highest percentage of movers, I-270 Corridor and Olney ranked at the top, with only 18 and 33 percent, respectively, occupying the same home as in 1970. Over one-third of the household movers to these two areas came from other parts of Montgomery County and close to one-half of the 1974 residents of the I-270 Corridor area did not reside in the County in April 1970.

#### MONTHLY GROSS RENT PAID: 1974-1970

The median rental of County residents in April 1974 was \$223, or an increase of 30 percent over 1970. Above average increases occurred in the I-270 Corridor and the Colesville area, and below average increases in the areas of the Urban Ring (See Table 15). Comparable information for the areas of Potomac, Olney and the Rural areas are not presented due to the small number of sample cases in the survey.

Colesville, with median rent of close to \$250, and Wheaton-Silver Spring, with a median rent of \$203, represent the highest and lowest rental areas. The median rental in Colesville is high because of the relatively few units (11 percent) renting for under \$200 per month, whereas Wheaton-Silver Spring provides a more balanced selection of units in all rental categories.

## LOCAL DEVELOPMENT TRENDS

### I-270 CORRIDOR FORECAST AREA

#### GROWTH INDICATORS

Change 1970-1976		1970-1975	1971-1975
Population	D.U.	Building Permits	Recorded Subdivision Dwelling Units
35,364	12,146	15,817	11,132

#### ESTIMATED 1976

Population	Dwelling Units
62,300	20,654

#### CHANGE 1976-1986

Forecast		High		Low	
Pop.	D.U.	Pop.	D.U.	Pop.	D.U.
46,000	16,750	59,200	20,560	32,400	12,280

The I-270 Corridor during the next ten years is expected to capture 32 percent of the residential construction and 47 percent of the County's population growth. The supply determinant for new housing in this corridor area is the availability of sewer commitments and vacant land. There are 4,650 acres of residentially zoned land

in the I-270 Corridor, and of the County's outstanding sewer authorizations nearly 70 percent are in the Seneca and Muddy Branch Basins which serve this area. Residential developers are presently committed to this area but growth may shift when Metro opens and competition with the Urban Ring slows the growth rate in the I-270 Corridor.

Our 1976-1986 Forecast rate projects 16,750 dwelling units of which 12,680 are single-family (75 percent) and 4,070 are multi-family (25 percent). The outlook will be for households with fewer children, in contrast to the larger child-oriented households of the 60's. The children of the post-World War baby boom have grown, married, and have children. A large number of these young families will be looking for multi-family units initially, although as time goes on many will seek single-family homes.

An inventory of the current subdivision activity in the Corridor indicates that there are over 10,000 outstanding residential sewer authorizations. The actual construction of these units will take a number of years. For example, in 1975 there were over 1,100 dwelling unit completions within the Corridor, (50 percent of the County's residential construction) while the remainder of the County accounted for the other 1,087.

Although the basic demand for housing is strong, the effective demand follows the cyclical trends underlying real estate financing and the rate of inflation. Together, they will set the pace at which families can obtain housing in Montgomery County.

P.A. 13 - Clarksburg - This planning area is not expected to show any significant growth over the next decade because it is outside of the sewer service envelope. Some activity may occur but all of these residential developments depend on Health Department

regulations, pending proper "perk" tests for septic systems.

For the past six years housing completions have averaged only 12 units per year. The picture of housing development looks very similar to that of the past. Residential development on much of the prime vacant land is not likely to occur because new sewer capacity down-county will slow development pressure up-county.

P.A. 19 - Germantown - The existence of appropriately zoned land and sewage treatment capacity in Germantown creates the likely attraction for continued development well into the 1980's, even though housing starts Countywide are faced with a number of large problems. Many young households who postponed buying their first home during the recession may decide to enter the housing market soon and will be willing to trade high up-county transportation costs for lower housing costs.

Germantown in contrast to the Gaithersburg Planning Area will provide for more multi-family development. The increasing shortage of rental apartments will also place an additional demand on housebuilders to provide more moderate-cost housing. The most concentrated housing activity occurs near Churchill and Clopper Road, where together these two areas have a potential for over 5,700 units.

In 1975, 61 building permits were taken out by developers, and in the first half of 1976 only 3 permits were issued. The annual housing completion rate from 1970-1975 averaged around 145 units. The Washington Suburban Sanitary Commission (WSSC) Master Flow File indicates Germantown has approximately 4,400 sewer connections remaining, and since 1960 the area has averaged about 14 dwelling units a year built on septic systems.

P.A. 20 & 21 - Gaithersburg and Vicinity - The prominent building activity in the Gaithersburg and Vicinity Planning Area will be single-family units where almost all of the vacant land is zoned for individual units. Montgomery Village continues to plan for single-family units with over 2,300 units by 1981, and no market potential for multi-family construction. During the 1981-1986 period 900 single-family and 500 multi-family units are planned. Developers seem to agree that interest rates and construction costs are too high to make new multi-family units economically feasible.

The opening of the Shady Grove Metro Station is planned for 1982. The potential residential development in this area is keyed to construction of the Advanced Wastewater Treatment Facility (AWT) and the building of Crabbs Branch Sewer. The Shady Grove Sector Plan does not anticipate construction of any multi-family units. Within the City of Gaithersburg, development is heavily weighted toward single-family homes, as there appears to be enough people in the County with sufficient income to keep the detached home market lively.

For the period January-May, 1976, developers have taken out over 300 building permits, while the housing completion rate for 1975 was over 850 units, the highest in the County. These figures are down from 1970 when 3,316 permits were issued and over 1,000 units were built.

## URBAN RING FORECAST AREA

### GROWTH INDICATORS

Change 1970-1976		1970-1975	1971-1975
Population	D.U.	Building Permits	Recorded Subdivision Dwelling Units
-2,796	10,331	11,192	4,959

### ESTIMATED 1976

Population	Dwelling Units
392,400	135,520

### CHANGE 1976-1986

Forecast		High		Low	
Pop.	D.U.	Pop.	D.U.	Pop.	D.U.
19,000	19,130	39,200	26,280	2,400	13,240

During the next 10 years the Urban Ring is expected to capture the second largest share of County growth, 36 percent of the housing and 19.5 percent of the population growth. The Rockville, Aspen Hill, and North Bethesda Planning Areas will maintain their past roles as areas likely to experience significant residential construction. Most of the construction in the Aspen Hill Planning Area will take place in the Rossmore community of age-restricted housing where the population yield per dwelling unit will be low.

The sewer moratorium in the Anacostia, Rock Creek and Little Falls Basins has virtually brought construction to a standstill. Its continuation will place additional burden on the County's tax base. In response to this, several homebuilders have proposed interim sewage treatment plants which are now under development in the Rock Creek and Anacostia Basins.

The characteristics of the population within the Urban Ring are also changing. The 1974 Montgomery County Census Update Survey revealed population declines in older neighborhoods, an increasing elderly population, and smaller average household sizes (3.16 persons per dwelling unit in 1970 to 2.97 in 1974), resulting partially from the maturing of persons in the 15-24 age group who are leaving their parents' homes for marriage, college or to otherwise form new households. Since 1970, these decreases in household size in the Urban Ring have slightly outstripped the movement of population into new dwelling units resulting in the small population decrease estimated for the area. There is a high mobility of the Urban Ring population. The movement of households from older sections of the community to surrounding suburbs greatly accelerated the population changes among the eight Planning Areas without significantly altering the total population within the Ring which has remained almost constant since 1970.

Good transit and highway access, a wide range of housing, and a multitude of public and private services combine to make the Ring area an attractive location. With very little vacant land remaining and a drop-off in new housing starts, residential property values and rents have been increasing. For example, the 1976 median price of a new home (single-family, townhouse) down-county is approximately \$63,500, while up-county the median price is about \$45,500. Thus many people, especially those in the middle- and upper-income

brackets, prefer to live in the well-located and established neighborhood areas of the Urban Ring. The immediate outlook for investment is promising, with redevelopment of the Central Business Districts and the opening of Metro. The sewer moratorium is a possible threat to this growth over the next several years.

P.A. 26 - Rockville - Between 1972 and 1974 over 650 new units per year were constructed in Rockville, but toward the end of 1974 the recession and tight money market started to slow construction down. In 1975, 54 new units were completed, while in the first quarter of 1976 only one unit was completed. Building permit activity for the first half of 1976 (65 permits) increased dramatically from the previous year's total when only 13 permits were issued. The development is expected to pick up in the near future resulting in an average annual construction rate of 340 units over the decade.

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Rockville is not as constrained by sewer restrictions as some other areas of Montgomery County. Previous commitments by the Washington Suburban Sanitary Commission (WSSC) suggests continued development of single-family homes. The City is 80 to 85 percent developed and much of the infrastructure is complete.

Relatively little multi-family land is available for development in Rockville. Increase in high density development will occur in or near the CBD encouraged by Metro service. This increase will be reflected in scale of development rather than in additional land being absorbed.

P.A. 27 - Aspen Hill - Most of the 1975 and 1976 building permit activity and housing completions occurred in Rossmoor. For the period 1970-1975 housing completions averaged nearly 500 units per year; however, this building rate should slow down by 1981 when Rossmoor is expected to be fully developed. The

constraint to future development after 1981 is not the sewer moratorium but the lack of vacant land.

The existing single-family housing stock includes a variety of structures ranging from older, high-priced homes to a large supply of middle-priced homes built in the 60's and early 70's. Average household size will continue to decline during the next 10 years as older children leave home.

In the latter part of the decade, the population factor may be the intra-county movement of households, possibly "empty nesters" resettling in down-county areas or Rossmoor, thereby allowing the cyclic change to take place as newly formed households move into the area.

P.A. 30 - North Bethesda - Only 5 housing completions and no building permits were issued for North Bethesda during the first months of 1976. During the six-year period 1970-1975, housing completions averaged 57 units per year and building permits averaged 289 per year.

When compared to the Bethesda Planning Area, North Bethesda's prime incentive for development is the availability of vacant land around Metro. The full impact of Metro development is not likely to be felt until after 1982 at the earliest, and until that time residential construction is likely to follow the current trend. The decline in building cannot be blamed entirely on the sewer moratorium. Poor economic conditions and lack of permanent finances also contribute to the low building rate, but the inflation trend has improved and this has brightened the outlook of prospective homebuyers. Part of the demand will be for smaller well-located housing close to transit facilities and employment centers. This shift is not expected to affect the basic character of the housing in North

Bethesda which will continue to be large expensive detached units.

P.A. 31 - Kensington-Wheaton - The Kensington-Wheaton Planning Area has approximately 30 single-family and no multi-family sewer connections remaining. Only 2 building permits were in 1975, and 2 permits have been issued for the period January-May, 1976. A total of 5 subdivision lots have been filed for the first half of 1976. The housing completion rate for the past 6 years has averaged 130 units a year.

Some multi-family housing sewerage capacity is expected in order to construct a public housing project for the elderly. This additional capacity will be made available through private consortium development.

Significant new construction is expected to occur after 1983 when three Metro stations will open in this area.

P.A. 32 - Kemp Mill-Four Corners - The only large tract of vacant land available for development is the Four Corners site at I-495 and University Boulevard. The development potential is high but the soft condominium market and the economic infeasibility of constructing rental units will probably delay any construction until after 1981. There is some possibility for single-family construction in the northern and southern sections, but the Planning area is largely built-up.

From 1970 to 1975, a total of 211 residential units were constructed, averaging about 35 dwellings a year. Currently, the WSSC Flow Master File reports only 15 single-family sewer connections remaining. Building permits have dropped considerably since 1970; in 1970 there were 172, in 1975 there were three. The outlook is the same as that of the past 2 years, therefore there should be no dramatic change in housing completions over the next 5 years.

P.A. 35 - Bethesda - According to WSSC figures, Bethesda has over 250 single-family and 485 multi-family sewer connections remaining, but this Planning Area is under continuing sewer moratorium so no new commitments are expected until conditions change. For the period January-May, 1976, the subdivision office received requests to build 67 new single-family homes, while for the same period 13 building permits were taken out by developers. The 1970-1975 housing unit completions indicate an average of 600 new dwelling units a year, while in the first quarter of 1976 only 10 houses were built. The conclusion is that previous building commitments have temporarily built out the Planning Area. Bethesda by 1982 will host three Metro stations and should add development pressure to what is already an attractive housing location.

P.A. 36 - Silver Spring; & P.A. 37 - Takoma Park - Silver Spring and Takoma Park will experience very limited single-family growth and no multi-family development during the next 5 years. The WSSC Flow Master File shows that both areas have less than 20 sewer connections remaining. The prospect for new residential construction should start to improve after 1978 when the Silver Spring Metro Station is scheduled to open.

From 1970-1975 the housing completion rate has been extremely low; only 15 dwelling units have been built in Silver Spring and 8 dwelling units in Takoma Park. Current building permit and subdivision activity indicates that this slow trend will continue for the immediate future and until sewer capacity problems are resolved.

The area is a major retail and employment center serving Montgomery and Prince George's Counties and the District. It ranks high among the County's activity centers in retail space, office space, employment and

hotel rooms. It also has a substantial residential base including large numbers of both garden and high-rise apartments. The residential vacancy rate is among the lowest in the County.

#### COLESVILLE FORECAST AREA

##### GROWTH INDICATORS

Change 1970-1976		1970-1975	1971-1975
Population	D.U.	Building Permits	Recorded Subdivision Dwelling Units
3,947	2,726	3,586	2,900

##### ESTIMATED 1976

Population	Dwelling Units
45,600	14,676

##### CHANGE 1976-1986

Forecast		High		Low	
Pop.	D.U.	Pop.	D.U.	Pop.	D.U.
4,300	3,950	10,400	5,900	-3,000	1,600

Our 1976-1986 Forecast rate shows that the Colesville Forecast Area will experience an 8 percent increase in

dwelling units and a 4 percent increase in population. During the 1970-1975 period, dwelling completions averaged an annual rate of 509 units and the population increased at an annual rate of 940 persons. The low rate of population growth is due to decline in average household size primarily in older single-family dwellings.

The area contains substantial close-in R-200 zoned land within the ten-year sewer service envelope. Since 1970, almost no authorizations for sewer service have been issued within the Anacostia Basin except where it was necessary to relieve septic problems and economic hardships. If sewer moratorium constraints are lifted by construction of the Anacostia consortium interim plant, and/or relief of sewer transmission constraints, then the remaining vacant land suitable for development will have a significant impact on population growth.

The area contains major reserves of multi-family zoned land but, again, the continuing problem of sewer capacity and high construction costs makes this investment strategy unlikely in the near future. The assumption is that apartment construction will maintain current low levels with the impact of high density development not likely until after 1981, and then perhaps at a moderate rate. On the other hand, major development projects are always possible because of the combination of excellent highway access, vacant high density land, and the location within the Baltimore-Washington Corridor.

P.A. 28 - Cloverly - The area contains large amounts of RE-2 zoned land which maybe suitable for septic development. The remaining portion of the Planning Area is zoned R-200. Development of this half-acre land is not likely because extensions of sewer lines are not programmed for a 7 to 10 year period.

The growth from 1970-1974 averaged 245 new units annually. The building rate has been declining in recent years; for example, in 1970, 143 dwelling units were built, while in 1975 only 81 units were completed. Building permits were also down. In 1970, 115 building permits were issued and in 1975 only 15 permits were taken out by developers. In the first half of 1976, 3 building permits were issued, and 15 single-family homes were constructed during the first three months.

P.A. 33 - White Oak - Little development has occurred in the White Oak Planning Area over the past 4 years. In 1970, the dwelling units totaled 8,654 (single-and multi-family) while 1975 reports 9,099 units, a 5 percent increase of 445 units. Six building permits were taken out by developers in 1975, while in the first half of 1976 only 2 building permits were issued.

According to the WSSC Flow Prediction Master File, 650 multi-family sewer connections remain in the White Oak area. Development is possible but apartment supply and demand conditions suggest that development will be delayed.

P.A. 34 - Fairland - The 1970-1975 data on housing completions indicates that Fairland averaged about 193 dwelling units a year, with the majority of these new units being multi-family.

#### HOUSING UNIT INVENTORY

April 1970	
<u>Single-Family</u>	<u>Multi-Family</u>
1,692	128

April 1975	
<u>Single-Family</u>	<u>Multi-Family</u>
1,870	915

No housing completions were reported for the first quarter of 1976 and only 2 building permits were issued to developers. For the Period January-May 1976, the Subdivision Office reviewed plans for 71 building lots.

Modest growth is projected for this Planning Area and any large-scale construction that does take place will result from capacity provided by the consortium.

#### OLNEY FORECAST AREA

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#### GROWTH INDICATORS

Change 1970-1976		1970-1975	1971-1975
Population		Building Permits	Recorded Subdivision Dwelling Units
11,187	3,382	3,056	1,161

ESTIMATED 1976	
Population	Dwelling Units
23,700	6,642



CHANGE 1976-1986					
Forecast		High		Low	
Pop.	D.U.	Pop.	D.U.	Pop.	D.U.
11,000	4,000	13,600	4,700	1,000	2,300

The Olney Forecast Area contains over 42,500 acres of land with over 10 percent of the land area being served by public water and sewer. The land use is essentially rural and agricultural surrounding a growing concentration of suburban subdivisions grouped around a commercial center in the town of Olney. The road network is typical of those seen in rural settings that have not felt the full impact of urbanization. There is an existing concentration of industrial land use in the Southlawn area directly north of the Pockville corporate limit; however, area Master Plans do not envision any major increase in this use.

The analysis of existing zoning, building permits and subdivisions indicates that the area's growth will be strong over the next 10 years, as it is projected to grow by 46 percent or at an average annual rate of 1,100 persons.

P.A. 22 - Rock Creek - The Rock Creek Planning Area has a low population density. The area is essentially rural with typical upcounty roads and agriculture as the dominant land use. The Master Plan is designed to retain the current low density profile.

The projected population increase by 1986 is 1,800 persons. The 1970-1975 data on housing completions shows an average building rate of 74 units per year. One dwelling unit was constructed and only 5 permits

were issued during the first months of 1976. For the period January-May, 1976, 248 single-family lots of subdivision were submitted for approval. During 1975, 31 subdivision lots were submitted for preliminary review and 19 were approved.

P.A. 23 - Olney - In 1966 Olney was a small rural town. However, in just 10 years, approximately 13,500 people have settled in the Planning Area, representing a 236 percent increase in population. Our Forecast rate for 1986 projects an increase of 9,200 people, bringing the total population to 28,400 persons. The high construction rates of the 1970-1974 period attest to the attractiveness of this area for residential development. The 1966 Master Plan designates Olney as a satellite community having an ultimate population of 29,000 persons. This Master Plan is now in the early stages of revision. By the end of the Forecast decade the residential population envisioned by the current Master Plan will be nearly achieved.

#### Housing completions

<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
486	502	688	968	252	42	16

For the period 1970-1974 the average annual housing completion rate was over 550 dwelling units. In 1975 the completion rate dropped to 42 dwelling units, and for the first quarter of 1976 only 16 homes were constructed. The sudden drop in housing completions indicates that developers have used up existing sewer connections. New sewerage capacity will be provided, however, by the development of a private consortium treatment plant in the Rock Creek Basin.

Currently there are 15 approved preliminary plans and three pending preliminary subdivision plans awaiting

further development, and they account for almost all of the 9,200 people projected to move into this area by 1986. More important is that there is more vacant land in the center of Olney that could be developed by the end of the decade.

## POTOMAC FORECAST AREA

### GROWTH INDICATORS

Change 1970-1976		1970-1975	1971-1975
Population	D.U.	Building Permits	Recorded Subdivision Dwelling Units
13,979	4,018	3,750	2,856

### ESTIMATED 1976

Population	Dwelling Units
42,200	11,373

### CHANGE 1976-1986

Forecast		High		Low	
Pop.	D.U.	Pop.	D.U.	Pop.	D.U.
8,000	5,300	13,300	6,780	1,600	3,550

The Potomac Forecast Area includes Montgomery County's finest residential areas. The majority of the homes range from expensive single-family residences, located on lots of 9,000 square feet minimum, to large spacious estates.

High and rising incomes contribute strongly to the pressures for development. According to our 1974 Census Update Survey, the median family income in the Potomac area was \$31,100, while the median County rate was \$21,800. From an investment viewpoint Potomac has a psychological edge and the demand for single-family homes should remain strong despite many families being priced out of the housing market.

Since 1960 over 1,000 dwelling units have been constructed on septic systems averaging an annual completion rate of over 70 dwelling units. The sewer moratorium will not be a major constraint in the area because there is an abundance of vacant land suitable for septic development. Although 5,300 new units will likely be constructed during the next 10 years, total population will increase only moderately because of the large number of older children who will be leaving to form new households.

P.A. 25 - Travilah - The WSSC Master Flow File indicates this Planning Area to have over 260 sewer connections remaining. According to the 1975 plans submitted for subdivision review, developers requested approval of 57 single-family units while, for the period January-May 1976, 270 lots were submitted for approval. In the first half of 1976, 13 building permits were taken out by developers, while in the first quarter of 1976 only 19 homes were built. From 1970-1975 the annual housing completion rate was 95 dwelling units, and since 1960 over 400 dwellings were constructed on septic systems, averaging over 25 dwelling units per year.

Although the single-family market has declined somewhat, this situation is expected to reverse itself over the next 5 years due to the stability of the area and the excellent opportunity for builders to develop large expensive homes.

P.A. 29 - Potomac - This Planning Area is expected to show strong growth over the next decade. According to the WSSC Master Flow File, this area has 1,300 sewer commitments available for development. The 1970-1975 data on housing completions show that this area built, on an average, over 570 dwelling units a year. Our 1976-1986 Forecast rate indicates that the area will experience a 39 percent increase in dwelling units and an 8 percent increase in population. In the first half of 1976, developers were issued 160 building permits, the second highest in the County. The Planning Area ranks first in septic development with over 600 dwelling units constructed since 1960, averaging almost 40 a year.

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#### DAMASCUS AND POOLESVILLE FORECAST AREAS

##### GROWTH INDICATORS

Change 1970-1976		1970-1975	1971-1975
Population	D.U.	Building Permits	Recorded Subdivision Dwelling Units
5,509	2,053	3,259	2,236

Estimated 1976	
Population	Dwelling Units
23,800	7,094

Change 1976-1986					
Forecast		High		Low	
Pop.	D.U.	Pop.	D.U.	Pop.	D.U.
8,700	3,370	10,300	3,780	3,600	2,030

Poolesville, Damascus and Darnestown combined will account for more than 58 percent of the population growth in this Forecast Area by 1986.

Poolesville, with an existing population of 2,930 persons, will grow to nearly 4,730 persons by 1986. There are small amounts of half acre zoned land in the peripheral locations which will support future development, but the lack of adequate highway systems plus limited sewerage capacity will not allow significant growth by 1986. Poolesville is also surrounded by the 5-acre Rural zone which should further discourage large-scale development. During the 1970-1975 period, an average of 112 dwelling units were built each year. In the first quarter of 1976, no dwelling units were built; however, during the first five months developers were issued 34 building permits.

The Damascus area will experience moderate development even though there is an abundance of vacant land. This section of Montgomery County is very attractive to many people who want to get away from the traffic, noise, and other intrusions common to central down-

county areas. The sewer moratorium will encourage growth in this area; however, the existing sewage treatment plant in Damascus is expected to carry only a limited amount of new residential development over the next five years.

Damascus experienced an average annual increase of 80 persons during the 1970-1975 period. In the first half of 1976, 6 building permits were issued to developers and no dwelling units were constructed during the first quarter. In 1975, all 44 subdivision lots submitted for preliminary review were approved.

During the 1960-1975 period, the Rural Forecast Area captured 45 percent of the dwelling units constructed on septic systems in the County. The heaviest concentration occurred in Damascus, Goshen and Darnestown Planning Areas where over 1,700 units were built.

# POPULATION DENSITY IN MONTGOMERY COUNTY, 1976

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## ABSOLUTE VALUE RANGE APPLYING TO EACH LEVEL (Persons per Square Mile)

LEVEL	MINIMUM	MAXIMUM*
1	61.90	1858.84
2	1858.84	3793.79
3	3793.79	5658.75
4	5658.75	7578.07
5	7578.07	27600.00

\*('MAXIMUM' INCLUDED IN HIGHEST LEVEL ONLY.)

## SYMBOLS

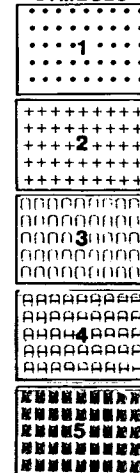


FIGURE 10

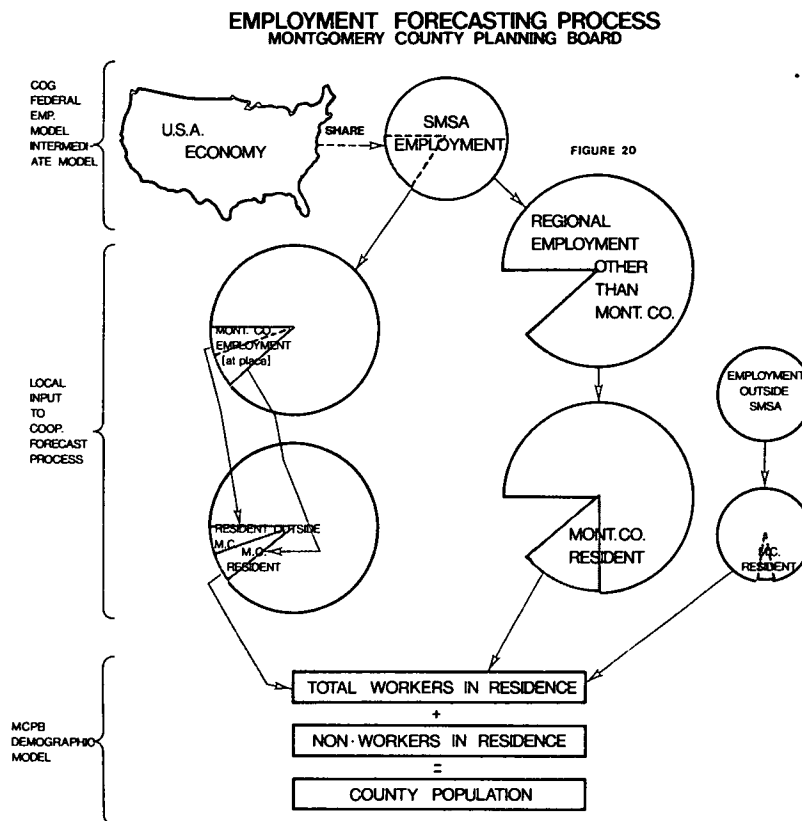
## SECTION 6 - EMPLOYMENT FORECAST FOR MONTGOMERY COUNTY 1976-1986

### COUNTY-WIDE EMPLOYMENT GROWTH

Montgomery County is projected to maintain its rank as a major employment center, second only to the District of Columbia, within the Washington Standard Metropolitan Statistical Area. In 1986 the County will have 333,500 at-place employees, 80,000 more than it has this year. This is a compounded annual growth rate of 2.8%, compared to the Washington SMSA employment growth rate of 2.5%. Over the 10-year span the County will increase its share of SMSA employment from 15% to 17%.

On an average annual basis the number of at-place jobs in the County will increase by 8,300 between 1976 and 1981, and by 7,700 between 1981 and 1986. This is considerably less than our historical growth rates but consistent with the lesser growth rates projected for the region. From 1970 to 1976, an average of 12,000 additional jobs per year located in the County. Given the 1970 employment base of 181,700, this translates to a growth rate of 5.7% per year. Between 1976 and 1986, the County will capture approximately 19% of the employment growth in the SMSA.

Between 1972 and 1974 the County at-place employment increased by only 8,500 per year. It is estimated that this slower rate of growth will continue. Employers will have to contend with the assurance of sewer permits when new structures are anticipated. In the economically "hot" areas of the County -- Friendship Heights and Bethesda, prospective increases in at-place employment have been dampened by new zoning. Employers will also be faced with investors of expansion capital who are more cautious now than in the boom years of the late 1960's.



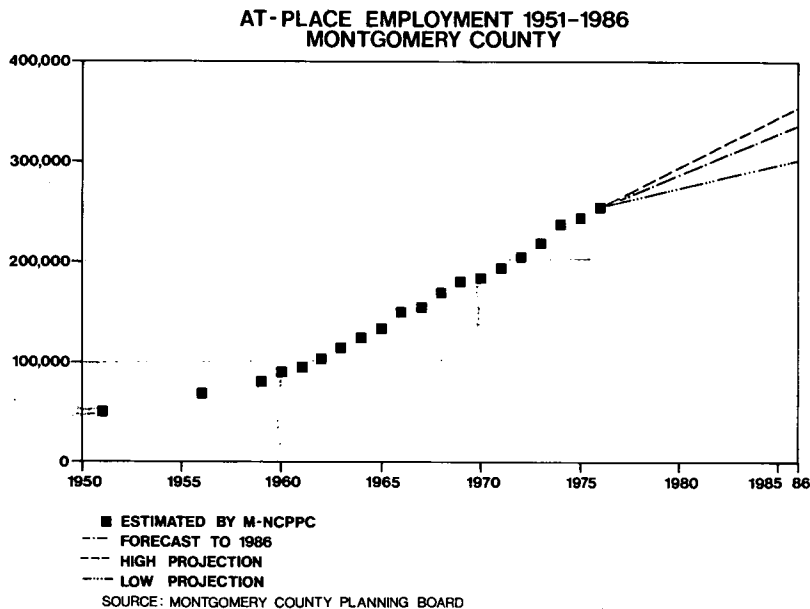


FIGURE 21

The character and location of Montgomery County's employment centers will not change substantially over the next 10 years. The filling-in process will continue in the Urban Ring area. As land becomes less available down-county, growth will continue in the I-270 Corridor, which includes the Gaithersburg area. The Federal Government and the service sector will continue to dominate the character of the County's employment. Retail workers, however, will become a slightly larger share of the total work force by 1986.

#### THE RELATIONSHIP BETWEEN REGIONAL EMPLOYMENT GROWTH AND COUNTY GROWTH

Montgomery County's growth is directly related to the growth of the Washington SMSA. People residing in the County commute to their jobs both inside and outside the County's boundaries. Non-county residents commute to their jobs in County. Every additional job created in the Washington SMSA has the possibility of affecting the County's growth in three ways:

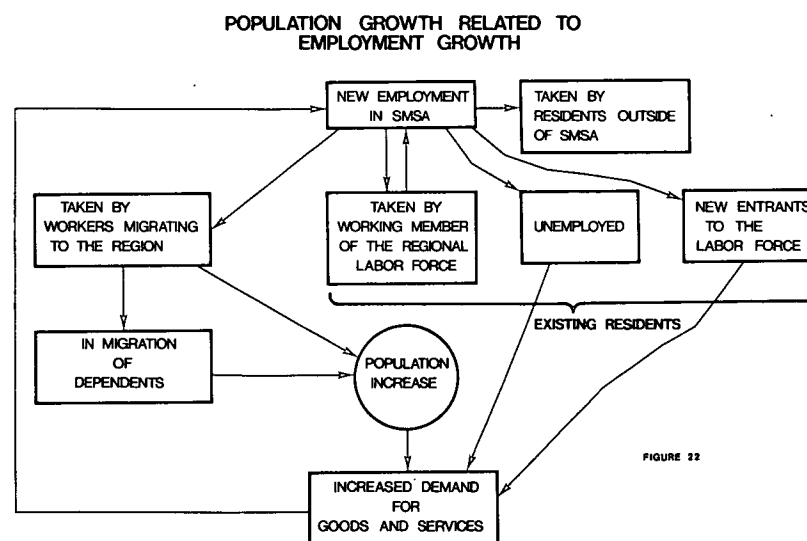
- (1) The job can locate in Montgomery County. This will eventually lead to higher commercial space needs and additional commercial structures. This additional employee will occasionally shop in areas convenient to the job. Thus the employee will have the secondary effect of increasing the economic demand for consumer goods. When this demand is strong enough, more retail employees will be hired.
- (2) The job may be taken by an existing County resident. This increase in income will reflect itself in higher demand for goods and services. If the demand is strong enough it will likely lead to more service and retail jobs in the County.

- (3) The job may cause a person to move into the County. This increase in the County's housing demand will invariably lead to additional housing construction. Just as the existing residents' additional income would lead to a greater demand for goods and services, so would the income of a new resident.

The result of the Council of Governments (COG) Cooperative Forecasting Process has been a reduction from past projections in the anticipated number of additional jobs over the next 10 years in the Metropolitan area. Previously, the region was projected to contain 1,948,000 jobs by 1985. This represented a growth of 515,000 from 1972, an annual rate of almost 40,000 jobs. The current employment projection for 1985 is 1,918,000 jobs, 3,000 employees per year less than the previous projection.

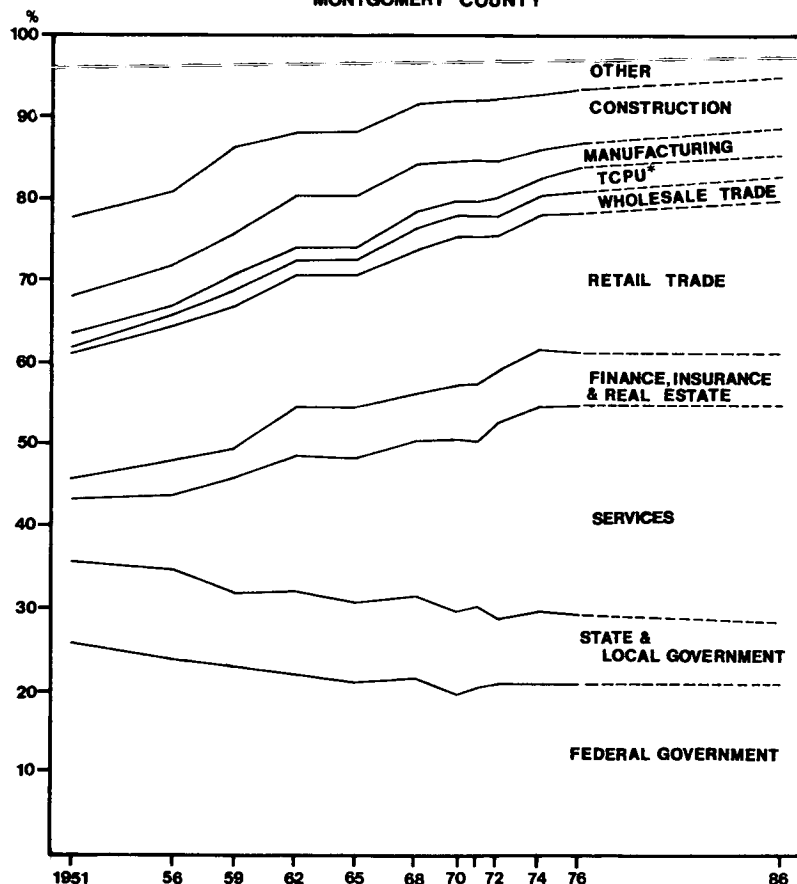
The official COG forecast 1972 to 1985 indicates that the District of Columbia will capture 27% of the region's employment growth (127,700 jobs) in that time. This is greater than any other jurisdiction's share. In 1972, the District had 43% of the jobs in the SMSA. Thus, even with 27% of the growth, the District will have only 40% of the region's employment by 1985. Montgomery County had 15% of regional employment in 1972 but will have 17% by 1985. This increased share is explained by the fact that the County absorbed more than 26% of SMSA employment growth between 1970 and 1976, and will absorb 19% of this growth in the future to 1986. The official COG forecast indicates that the County will grow by 108,300 jobs between 1972 and 1985.

The third largest portion of regional employment growth will locate in Fairfax County. This jurisdiction will witness 104,700 new jobs between 1972 and 1985,





**DISTRIBUTION OF EMPLOYMENT BY SECTOR**  
1951-1976 WITH PROJECTIONS TO 1986  
MONTGOMERY COUNTY



\*TRANSPORTATION COMMUNICATION & PUBLIC UTILITIES

SOURCE: MONTGOMERY COUNTY PLANNING BOARD

FIGURE 23

25,000 less than the growth in the District of Columbia and 3,700 less than Montgomery County. Prince George's County will get 73,100 new jobs in the same time period. Arlington, Alexandria, Prince William and Loudoun Counties will split the remaining regional employment growth of 69,500 jobs among them.

At the heart of the above regional employment projections is the assumption that regional Federal Government employment will continue to increase. These government jobs will in turn draw more private employees who work with the public sector. Any major change in location policy of the Federal Government will drastically affect the accuracy of the regional forecast.

#### STRUCTURE OF EMPLOYMENT BY SECTOR

The composition of employment by sector is relatively stable. The continuation of trends is expected to result in relatively minor changes in the shares of employment by sector.

The service sector's share of total employment will continue to increase as part of the nationwide trend toward more service employment. Between 1972 and 1974, the service sector went from 23.9% of total employment to 25.1%. The sector is expected to increase but at a slower rate than experienced between 1972 and 1974. Federal Government's share remained stable in the 1972-1974 period but is expected to decline slightly as the County becomes more diversified. Retail trade showed a slight increase 1972-1974 and will increase its share as the planned shopping centers for the area are developed. Wholesale trade and finance, insurance, and real estate will increase their shares slightly while State and local government, manufacturing, and construction will decrease. The share of the "other" sector--agricultural services, mining, self-employed and household workers-- will

MONTGOMERY COUNTY EMPLOYMENT  
BY SECTOR 1976-1986

TABLE 16

	Change 1976-1986			1976		1986	
	#	%		#	%	#	%
Constru.	3,650	4.6	Constru.	16,700	6.6	20,350	6.1
Manufac.	2,660	3.3	Manufac.	9,350	3.7	12,010	3.6
TCPU <sup>1</sup>	1,890	2.4	TCPU <sup>1</sup>	6,450	2.5	8,340	2.5
Wholesale			Wholesale				
Trade	3,130	3.9	Trade	6,540	2.6	9,670	2.9
Retail			Retail				
Trade	19,750	24.7	Trade	42,680	16.8	62,430	18.7
FIRE <sup>2</sup>	6,070	7.6	FIRE <sup>2</sup>	16,610	6.5	22,680	6.8
Services	22,060	27.5	Services	64,940	25.5	87,000	26.1
Local &			Local &				
State Gov.	3,930	4.9	State Gov.	21,350	8.4	25,280	7.6
Fed. Gov.	15,660	19.6	Fed. Gov.	52,740	20.8	68,400	20.5
Self-			Self-				
Employed			Employed				
& Other <sup>3</sup>	1,200	1.5	& Other <sup>3</sup>	16,140	6.4	17,340	5.2
TOTAL	80,000	100.0	TOTAL	253,500	100.0	333,500	100.0

63

<sup>1</sup>Transportation, Communication & Public Utilities

<sup>2</sup>Finance Insurance & Real Estate

<sup>3</sup>Other employment includes agricultural services, mining and household workers

Source: M-NCPPC Staff projection from 1972 and 1974  
COG at-place employment file.

continue its long-term decline in relative importance since they will grow at a slower rate.

#### FACTORS AFFECTING THE SPATIAL DISTRIBUTION OF EMPLOYMENT

The present and future geographic distribution of employment within the County is determined by the location of establishments in response to a number of locational forces.

These forces may be summarized under the following headings: accessibility, agglomeration, attractiveness and availability of a site.

Accessibility - Businesses must have accessibility to their markets, materials and labor force. The importance of each of these in determining the best location depends on the type of business. For instance, accessibility to their customers is usually of prime importance to retail establishments.

Agglomeration - Businesses often locate close together to benefit from agglomeration economies. These benefits occur in the form of savings from shared facilities, stronger attraction of specialized labor force, increased attraction of services and markets and the like. One example is the agglomeration of research and development (R&D) firms in the County which benefit from the presence of both other R&D firms and the several research-oriented Federal agencies in the County.

Attractiveness - The top management of firms often choose one location over another because it has an attractive living and working environment. Other attractiveness factors are: visibility and prestige of location, the terrain (particularly its suitability for building), zoning and other land-use regulations, ease of purchase, and price.

Availability of Site - Once the other locational criteria are reasonably met the availability of a site in this location is usually the determining factor in the final location choice.

The primary factor causing the shifts in spatial distribution observed in the County is the decreasing availability of land in prime locations (which naturally are the first ones taken). This forces both employment and residential land uses to move further out.

However, two factors combine as a counterforce to maintain a geographic distribution of employment similar to the existing pattern. First, once an employment establishment has made a location decision, there is a strong tendency for it to expand at the same location rather than to move elsewhere. Second, the major location forces as they apply to Montgomery County are relatively fixed, although they can change due to major public or private investment.

#### EMPLOYMENT CENTERS

The characteristic which distinguishes the major employment centers in the County from minor ones is office employment. Employment in office buildings is the highest density non-residential land use in the County, and is estimated to account for 40 percent of County employment.

The type of employment found outside of major employment centers is characterized by: shopping centers without nearby office buildings, local government institutional employment, particularly schools, and a few isolated major employment establishments with little or no surrounding development such as Comsat in Clarksburg or the Naval Ship R&D Center in Potomac.

# EMPLOYMENT FORECASTS FOR LOCAL AREAS (Supplementary Table S-13)

The existing geographic distribution of employment in Montgomery County is highly concentrated in the Urban Ring Forecast Area where 74.4 percent of County employment is located. Of this 74.4 percent, 91 percent is located in the Wisconsin Avenue-Rockville Pike and Georgia Avenue Corridors. The coming of Metro-rail service to these two corridors by the early 1980's will further strengthen their positions as the major employment concentration in the County.

The Rockville Corridor comprises Friendship Heights, the Bethesda CBD, the Bethesda Federal medical complex, the commercial development along Rockville Pike in North Bethesda and the center of the City of Rockville. These five employment concentration areas arranged linearly south to north up the corridor account for 64.2 percent of the Urban Ring employment. Fifty-eight percent of employment in this corridor is located inside the Beltway and 42 percent in the outer portion.

The Georgia Avenue Corridor extends from Takoma Park at the District Line through the Silver Spring CBD and on up Georgia Avenue to include the Kensington CBD, Wheaton, Glenmont and the Aspen Hill Shopping Center. This corridor accounts for 26.8 percent of total County employment, and 33.7 percent of the Urban Ring employment. Fifty-four percent of Georgia Avenue Corridor employment is located inside and 46 percent outside the Beltway.

In the coming 10-year period there will be a shift in the share of employment in these two corridors from inside the Beltway to outside the Beltway. This will occur as buildable commercial and industrial land becomes less available in Bethesda and Silver Spring.

# EMPLOYMENT GROWTH FORECAST MONTGOMERY COUNTY 1976-1986 BY FORECAST AREA

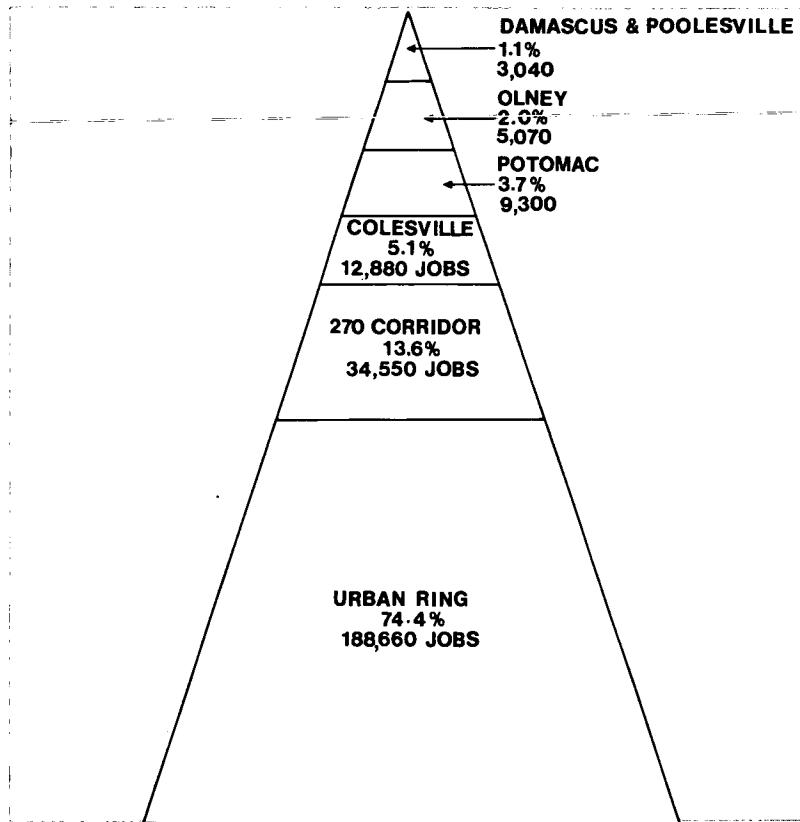
TABLE 17

	Estimated Employment 1976		Projected Employment 1986	
	#	%	#	%
Urban Ring	188,660	74.44	243,900	73.13
I-270 Corridor	34,550	13.63	52,100	15.62
Colesville	12,880	5.08	16,000	4.80
Potomac	9,300	3.67	11,000	3.30
Olney	5,070	2.00	6,500	1.95
Damascus	1,900	.74	2,300	.69
Poolesville	1,140	.44	1,700	.51
TOTAL COUNTY	253,500	100.00	333,500	100.00

	Projected Change		Percent Share of County Growth
	#	%	%
Urban Ring	55,240	21.79	69.05
I-270 Corridor	17,550	6.92	21.94
Colesville	3,120	21.23	3.90
Potomac	1,700	.67	2.12
Olney	1,430	.56	1.79
Damascus	400	.16	.50
Poolesville	560	.22	.70
TOTAL COUNTY	80,000	31.55	100.00

Source: Estimates and projections: M-NCPPC 1976 estimate subject to revision due to an on-going at-place employment study

## DISTRIBUTION OF EMPLOYMENT BY FORECAST AREA



ONE SQUARE INCH EQUAL 41,500 EMPLOYEES

SOURCE: MONTGOMERY COUNTY PLANNING BOARD

FIGURE 24

The share of County employment in Bethesda is projected to drop from 27.1 to 23.3 percent as North Bethesda's share rises from 12.2 to 14.4 percent. North Bethesda has the twin advantages of excellent transportation access to Route I-270, the Beltway and three future Metro-rail transit stations as well as abundant vacant commercial and industrial land in a relatively close-in location. For these reasons just under 17,000 new jobs should locate in North Bethesda, more than in any other planning area.

Silver Spring's share of County employment is projected to decline from 11.5 to 11.3 percent as Kensington-Wheaton's share remains stable at 8.6 percent. The Kensington-Wheaton area has good access to the Beltway as well as three future Metro-rail transit stations, but will be competing with the Rockville Corridor.

Outside of the Urban Ring, employment is most highly concentrated in the I-270 Corridor Forecast Area extending from Gaithersburg through Germantown and Clarksburg. This area accounts for 13.6 percent of the County's employment, 85.8 percent of which is in the Gaithersburg area. One major shift in the spatial distribution of employment expected by 1986 will be an increase in the share of total employment in the I-270 Corridor from its present 13.6 percent to 15.6 percent. There will also be a shifting of employment shares within the corridor as Germantown increases from 12.2 percent to 17.1 percent of the corridor and Clarksburg increases from 1.9 percent to 2.5 percent, with Gaithersburg decreasing from 85.8 percent to 80.2 percent.

# ***supplementary tables***

Forecast from  
AMU Team  
dated 1/17/88

TABLE S-1

POPULATION AND DWELLING UNIT FORECAST 1976-1986

Existing and Forecast Population and Housing Units in Montgomery County  
By Planning Areas and Forecast Areas

NOTE: ALL FIGURES ARE FOR JANUARY 1.

Forecast Area and Planning Area	1976		Forecast 1981		Forecast Change 1976-81		Forecast 1986		Forecast Change 1976-86	
	DU's.	Pop.	DU's.	Pop.	DU's.	Pop.	DU's.	Pop.	DU's.	Pop.
Urban Ring	135,520	392,400	141,110	386,400	5,590	(-) 6,000	154,650	411,400	19,130	19,000
PA 26 Rockville	14,985	62,000	15,755	46,800	770	(-) 1,300	18,415	52,700	3,430	4,600
27 Aspen Hill	13,491	46,000	16,441	48,700	2,950	2,700	17,091	46,800	3,600	800
30 N. Bethesda	11,057	45,000	11,807	31,000	750	0	14,657	37,300	3,600	6,300
31 Wheaton	25,926	83,000	26,356	79,600	430	(-) 2,300	27,656	79,600	1,730	(-) 2,300
32 Kemp Mill	11,213	34,500	11,223	31,500	10	(-) 3,000	12,543	34,500	1,330	0
35 Bethesda	33,003	108,000	33,653	89,700	650	(-) 400	35,803	95,100	2,800	5,000
36 Silver Spring	15,405	78,400	15,435	32,500	30	(-) 1,900	17,935	39,200	2,530	4,800
37 Takoma Park	10,440	26,400	10,440	26,600	0	200	10,550	26,200	110	(-) 200
I-270 Corridor	20,654	62,300	29,154	88,400	8,500	26,100	37,404	108,300	16,750	46,000
PA 13 Clarksburg	594	2,100	844	2,800	250	700	1,144	3,800	550	1,700
19 Germantown	1,745	6,200	5,245	18,200	3,500	12,000	9,495	29,000	7,750	22,800
20 & 21 Gaithersburg	18,315	54,000	23,065	67,400	4,750	13,400	26,765	75,500	8,450	21,500
Colesville	14,676	45,600	16,076	44,200	1,400	(-) 1,400	18,626	49,900	3,950	4,300
PA 28 Cloverly	2,790	9,600	3,190	10,100	400	500	3,440	10,300	650	700
33 White Oak	9,101	53,800	9,601	25,400	500	(-) 2,100	10,701	27,600	1,600	100
34 Fairland	2,785	8,500	3,285	8,700	500	200	4,485	12,000	1,700	3,500
Potomac	11,373	35,000	14,073	44,500	2,700	2,300	16,673	50,200	5,300	8,000
PA 25 Travilah	2,088	7,200	2,788	9,000	700	1,800	3,788	12,300	1,700	5,100
29 Potomac	9,285	35,000	11,285	35,500	2,000	500	12,885	37,900	3,600	2,900
Olney	6,642	23,700	8,242	27,400	1,600	3,700	10,642	34,700	4,000	11,000
PA 22 Rock Creek	1,223	4,500	1,523	5,200	300	700	1,923	6,300	700	1,800
23 Olney	5,419	19,200	6,719	22,200	1,300	3,000	8,719	28,400	3,300	9,200
Damascus	4,156	14,300	5,186	16,900	1,030	2,600	6,076	19,100	1,920	4,800
PA 10 Bennett	849	2,720	1,029	3,100	180	380	1,169	3,400	320	680
11 Damascus	1,195	3,780	1,495	4,500	300	720	1,895	5,500	700	1,720
14 Goshen	1,164	4,260	1,514	5,200	350	940	1,714	5,800	550	1,540
15 Patuxent	948	3,540	1,148	4,100	200	560	1,298	4,400	350	860
Poolesville	2,938	9,500	3,618	11,200	680	1,700	4,388	13,400	1,450	3,900
PA 12 Dickerson	358	1,240	388	1,260	30	20	428	1,500	70	260
16 Martinsburg	55	200	75	250	20	50	105	340	50	140
17 Poolesville	1,022	2,930	1,322	3,570	300	640	1,722	4,730	700	1,800
18 Lower Seneca	488	1,710	518	1,720	30	10	568	1,830	80	120
24 Darnestown	1,015	3,420	1,315	4,400	300	980	1,565	5,000	550	1,580
TOTAL COUNTY	195,959	624,000	217,459	619,000	21,500	29,000	248,459	687,000	52,500	97,000

Source: 1976 Housing Units - Estimated by Montgomery County Planning Board Staff from data compiled from records of the Office of Supervisor of Assessments, Montgomery County  
1976 Population - Estimated by Montgomery County Planning Board Staff  
1981 and 1986 Population and Housing Units - Forecast Rate, Montgomery County Planning Board

EXISTING AND PROJECTED POPULATION AND DWELLING UNITS  
IN MONTGOMERY COUNTY BY MAJOR DRAINAGE BASINS

Drainage Basin	1976		Forecast 1981		Change 1976-81		Forecast 1986		Change 1976-86	
	DU's.	Pop.	DU's.	Pop.	DU's.	Pop.	DU's.	Pop.	DU's.	Pop.
Patuxent River	3,060	11,200	3,560	11,910	500	710	4,510	14,841	1,450	3,641
Monocacy River	1,406	4,319	1,586	4,761	180	442	1,726	5,018	320	699
Little Monocacy River	612	1,842	642	2,076	30	234	682	2,389	70	547
Potomac River	6,224	18,588	6,744	20,310	520	1,722	7,274	21,081	1,050	2,493
Little Falls	10,824	29,038	11,224	29,811	400	773	13,074	34,718	2,250	5,680
Rock Run	1,311	4,242	1,711	5,363	400	1,121	2,011	5,913	700	1,671
Muddy Branch	5,662	18,487	6,237	19,406	575	919	7,362	21,558	1,700	3,071
Rock Creek	69,572	199,412	72,372	200,454	2,800	1,042	81,062	219,755	11,490	20,343
Seneca Creek	16,545	49,622	25,500	78,318	8,955	28,696	33,025	97,265	16,480	47,643
Anacostia River	51,832	156,384	56,122	152,730	4,290	- 3,654	61,222	160,861	9,390	4,477
Watts Branch	6,707	23,366	7,807	23,907	1,100	541	10,007	29,854	3,300	6,488
Cabin John Creek	<u>22,204</u>	<u>73,500</u>	<u>23,954</u>	<u>69,954</u>	<u>1,750</u>	<u>- 3,546</u>	<u>26,504</u>	<u>73,747</u>	<u>4,300</u>	<u>247</u>
Total County	195,959	590,000	217,459	619,000	21,500	29,000	248,459	687,000	52,500	97,000

SOURCE: 1976 Dwelling Units - Estimated by Montgomery County Planning Board Staff from data compiled from records of  
Office of Supervisor of Assessments, Montgomery County

1976 Population - Estimated by Montgomery County Planning Board Staff

Population and Dwelling Units - Projections by Staff, Montgomery County



TABLE S-3

HIGH POPULATION PROJECTION SERIES  
1976-1986  
Montgomery County

	(639,000) 1981	Change 1976-1981	(736,000) 1986	Change 1976-1986
<u>Urban Ring</u>	(391,300)	(- 1,100)	(431,600)	( 39,200)
PA 26	47,000	- 1,100	54,100	6,000
27	49,300	3,300	47,900	1,900
30	32,000	1,000	43,100	12,100
31	80,300	- 1,600	80,800	- 1,100
32	31,500	- 3,000	36,100	1,600
35	91,000	900	98,100	8,000
36	33,600	- 800	45,100	10,700
37	26,600	200	26,400	0
<u>I-270 Corridor</u>	( 94,900)	( 32,600)	(121,500)	( 59,200)
PA 13	2,900	800	3,900	1,800
19	22,000	15,800	35,800	29,600
20&21	70,000	16,000	81,800	27,800
<u>Colesville</u>	( 47,200)	( 1,600)	( 56,000)	( 10,400)
PA 28	10,300	700	11,000	1,400
33	26,600	- 900	30,600	3,100
34	10,300	1,800	14,400	5,900
<u>Potomac</u>	( 47,700)	( 5,500)	( 55,500)	( 13,300)
PA 25	9,800	2,600	14,300	7,100
29	37,900	2,900	41,200	6,200
<u>Olney</u>	( 28,700)	( 5,000)	( 37,300)	( 13,600)
PA 22	5,400	900	6,900	2,400
23	23,300	4,100	30,400	11,200
<u>Damascus</u>	( 17,400)	( 3,100)	( 19,800)	( 5,500)
PA 10	3,200	480	3,500	780
11	4,670	890	5,770	1,990
14	5,360	1,100	5,940	1,680
15	4,170	630	4,590	1,050
<u>Poolesville</u>	( 11,800)	( 2,300)	( 14,300)	( 4,800)
PA 12	1,350	110	1,540	300
16	290	90	400	200
17	3,770	840	5,080	2,150
18	1,790	80	1,980	270
24	4,600	1,180	5,300	1,880

TABLE S-4

LOW POPULATION PROJECTION SERIES  
1976-1986  
Montgomery County

	(595,500) 1981	Change 1976-1981	(631,500) 1986	Change 1976-1986
<u>Urban Ring</u>	(382,100)	(-10,300)	(394,800)	( 2,400)
PA 26	45,900	- 2,200	48,500	400
27	47,100	+ 1,100	44,600	-1,400
30	30,200	- 800	35,200	4,200
31	79,200	- 2,700	77,600	-4,300
32	31,400	- 3,100	33,600	- 900
35	89,100	- 1,000	92,400	2,300
36	32,600	- 1,800	36,800	2,400
37	26,600	+ 200	26,100	- 300
<u>I-270 Corridor</u>	( 82,500)	( 20,200)	( 94,700)	( 32,400)
PA 13	2,100	--	2,600	500
19	16,600	10,400	22,800	16,600
20&21	63,800	9,800	69,300	15,300
<u>Colesville</u>	( 40,100)	( -5,500)	( 42,600)	( -3,000)
PA 28	8,900	- 700	8,600	-1,000
33	24,000	-3,500	24,800	-2,700
34	7,200	-1,300	9,200	+ 700
<u>Potomac</u>	( 40,900)	( -1,300)	( 43,800)	( 1,600)
PA 25	8,200	1,000	10,400	3,200
29	32,700	-2,300	33,400	-1,600
<u>Olney</u>	( 24,700)	( 1,000)	( 24,700)	( 1,000)
PA 22	4,400	- 100	4,400	- 100
23	20,300	1,100	20,300	1,100
<u>Damascus</u>	( 14,800)	( 500)	( 16,000)	( 1,700)
PA 10	2,740	20	2,860	140
11	3,840	60	4,400	620
14	4,520	260	4,840	580
15	3,700	160	3,900	360
<u>Poolesville</u>	( 10,400)	( 900)	( 11,400)	( 1,900)
PA 12	1,240	0	1,310	70
16	220	20	250	50
17	3,350	420	3,980	1,050
18	1,690	- 20	1,760	50
24	3,900	480	4,100	680

TABLE S-5

CHANGES IN THE HOUSING UNIT INVENTORY BY PLANNING AREAS  
IN MONTGOMERY COUNTY, APRIL 1970-APRIL 1976

Forecast Areas and Planning Areas	April 1970			April 1975			April 1976			Change 1970-1976		
	1&2 Family	Multi- Family	Total	1&2 Family	Multi- Family	Total	1&2 Family	Multi- Family	Total	1&2 Family	Multi- Family	Total
Urban Ring	82,739	42,450	125,189	86,820	48,647	135,467	86,889	48,809	135,698	4,150	6,359	10,509
PA 26 Rockville	8,890	3,752	12,642	10,365	4,616	14,981	10,370	4,616	14,986	1,480	864	2,344
27 Aspen Hill	8,169	2,323	10,492	9,475	3,983	13,458	9,493	4,145	13,638	1,324	1,822	3,146
30 N. Bethesda	5,837	4,876	10,713	6,108	4,943	11,051	6,119	4,943	11,062	282	67	349
31 Wheaton	19,540	5,602	25,142	19,997	5,929	25,926	19,997	5,929	25,926	457	327	784
32 Kemp Mill	8,715	2,287	11,002	8,782	2,431	11,213	8,797	2,431	11,228	82	144	226
35 Bethesda	22,093	7,283	29,376	22,575	10,418	32,993	22,595	10,418	33,013	502	3,135	3,637
36 Silver Spring	5,308	10,082	15,390	5,323	10,082	15,405	5,323	10,082	15,405	15	-	15
37 Takoma Park	4,187	6,245	10,432	4,195	6,245	10,440	4,195	6,245	10,440	8	-	8
I-270 Corridor	5,034	3,474	8,508	9,500	10,724	20,224	9,955	10,938	20,893	4,921	7,464	12,385
PA 13 Clarksburg	522	0	522	590	0	590	594	0	594	72	0	72
19 Germantown	861	13	874	1,485	179	1,664	1,615	207	1,822	754	194	948
20&21 Gaithersburg	3,651	3,461	7,112	7,425	10,545	17,970	7,746	10,731	18,477	4,095	7,270	11,365
Colesville	9,036	2,914	11,950	10,504	4,123	14,627	10,568	4,123	14,691	1,532	1,209	2,741
PA 28 Cloverly	1,470	6	1,476	2,522	220	2,742	2,585	220	2,805	1,115	214	1,329
33 White Oak	5,874	2,780	8,654	6,112	2,988	9,100	6,113	2,988	9,101	239	208	447
34 Fairland	1,692	128	1,820	1,870	915	2,785	1,870	915	2,785	178	787	965
Potomac	6,725	630	7,355	10,403	693	11,096	10,518	887	11,405	3,793	257	4,050
PA 25 Travilah	1,498	3	1,501	2,069	3	2,072	2,104	3	2,107	606	-	606
29 Potomac	5,227	627	5,854	8,334	690	9,024	8,414	884	9,298	3,187	257	3,444
Olney	3,206	54	3,260	6,008	603	6,611	6,057	603	6,660	2,851	549	3,400
PA 22 Rock Creek	768	11	779	1,211	11	1,222	1,213	11	1,224	445	-	445
23 Olney	2,438	43	2,481	4,797	592	5,389	4,844	592	5,436	2,406	549	2,955
Damascus	3,117	139	3,256	3,944	162	4,106	4,009	162	4,171	892	23	915
PA 10 Bennett	663	18	681	830	18	848	831	18	849	168	-	168
11 Damascus	899	73	972	1,121	73	1,194	1,122	73	1,195	223	-	223
14 Goshen	771	41	812	1,062	64	1,126	1,112	64	1,176	341	23	364
15 Patuxent	784	7	791	931	7	938	944	7	951	160	-	160
Poolesville	1,785	0	1,785	2,764	114	2,878	2,826	114	2,940	1,041	114	1,155
PA 12 Dickerson	321	0	321	351	0	351	358	0	358	37	-	37
16 Martinsburg	43	0	43	55	0	55	55	0	55	12	-	12
17 Poolesville	350	0	350	981	0	981	1,022	0	1,022	672	-	672
18 Lower Seneca	461	0	461	487	0	487	488	0	488	27	-	27
24 Darnestown	610	0	610	890	114	1,004	903	114	1,017	293	114	407
Total County	111,642	49,661	161,303	129,943	65,066	195,009	130,822	65,636	196,458	19,180	15,975	35,155

SOURCE: 1970 Housing Units obtained from final counts - U.S. Census of Housing and Population

1975 and 1976 Housing Units estimated by MCPB Staff from records of the Supervisor of Assessments for Montgomery County

TABLE S-6

BUILDING PERMITS ISSUED BY FORECAST AND PLANNING AREAS  
IN MONTGOMERY COUNTY

Forecast Areas and Planning Areas	1970	1971	1972	1973	1974	1975	January-April 1975				January-April 1976			
	Total DU's	Total DU's	Total DU's	Total DU's	Total DU's	Total DU's	1 & 2 Family	Townhouses	Apartments	Total	1 & 2 Family	Townhouses	Apartments	Total
Urban Ring	2,598	2,998	3,336	1,697	169	394	34	0	0	34	37	0	49	86
PA 26 Rockville	712	564	567	126	126	13	5	0	0	5	20	0	0	20
27 Aspen Hill	1,049	1,117	876	925	4	270	1	0	0	1	0	0	49	49
30 N. Bethesda	248	152	1,258	40	3	38	2	0	0	2	0	0	0	0
31 Wheaton	139	361	3	41	7	2	0	0	0	0	2	0	0	2
32 Kemp Mill	172	25	--	4	0	3	0	0	0	0	1	0	0	1
35 Bethesda	193	764	632	555	29	66	26	0	0	26	13	0	0	13
36 Silver Spring	84	8	--	5	0	2	0	0	0	0	1	0	0	1
37 Takoma Park	1	7	--	1	0	0	0	0	0	0	0	0	0	0
I-270 Corridor	3,376	4,205	2,741	3,434	1,012	1,049	12	7	0	19	31	278	0	309
PA 13 Clarksburg	3	21	28	9	29	10	0	0	0	0	3	0	0	3
19 Germantown	57	198	54	1,250	905	61	2	7	0	9	3	0	0	3
20&21 Gaithersbg.	3,316	3,986	2,659	2,175	78	978	10	0	0	10	25	278	0	303
Colesville	297	1,182	1,381	663	25	38	9	0	0	9	16	0	0	16
PA 28 Cloverly	115	276	667	290	23	15	2	0	0	2	3	0	0	3
33 White Oak	51	101	714	22	1	6	2	0	0	2	2	0	0	2
34 Fairland	131	805	--	351	1	1	1	0	0	1	2	0	0	2
15 Patuxent	0	0	0	0	0	16	4	0	0	4	9	0	0	9
Potomac	997	1,035	754	732	79	153	31	0	0	31	152	22	0	174
PA 25 Travilah	22	196	135	165	29	28	8	0	0	8	13	0	0	13
29 Potomac	975	839	619	567	50	125	23	0	0	23	139	22	0	161
Olney	751	799	1,174	261	29	42	4	0	0	4	13	0	0	13
PA 22 Rock Creek	214	149	566	62	9	21	0	0	0	0	5	0	0	5
23 Olney	537	650	608	199	20	21	4	0	0	4	8	0	0	8
Damascus	55	205	189	574	106	72	22	0	0	22	55	0	0	55
PA 10 Bennett	14	18	66	68	8	7	2	0	0	2	24	0	0	24
11 Damascus	5	80	--	353	25	7	3	0	0	3	1	0	0	1
14 Goshen	19	78	83	115	53	51	17	0	0	17	6	0	0	6
15 Patuxent	17	29	40	38	20	7	0	0	0	0	24	0	0	24
Poolesville	104	130	1,030	430	209	155	32	8	0	40	45	24	0	69
PA 12 Dickerson	3	6	5	7	12	8	3	0	0	3	1	0	0	1
16 Martinsburg	--	--	6	--	2	1	0	0	0	0	2	0	0	2
17 Poolesville	75	89	325	141	166	109	25	8	0	33	0	0	0	0
18 Lower Seneca	9	5	1	10	6	4	1	0	0	1	10	24	0	34
24 Darnestown	17	30	693	272	23	33	3	0	0	3	32	0	0	32
TOTAL COUNTY	8,178	10,554	10,605	7,791	1,629	1,903	144	15	0	159	349	324	49	722

Source: Compiled by Staff of the Montgomery County Planning Board from data of the Department of Environmental Protection, Montgomery County; Department of Licenses and Inspections, Cities of Rockville and Gaithersburg.

TABLE S-7

BUILDING PERMITS ISSUED IN MAJOR DRAINAGE BASINS IN MONTGOMERY COUNTY  
FOR CALENDAR YEARS 1970-1975 AND FOR JANUARY-JUNE, 1975-1976

Major Drainage Basin	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>January-April 1975</u>				<u>January-April 1976</u>			
	Total DU's	Total DU's	Total DU's	Total DU's	Total DU's	Total DU's	1&2 Family	Townhouses	Apartments	Total	1&2 Family	Townhouses	Apartments	Total
Patuxent River	389	438	648	200	45	44	8	0	0	8	14	0	0	14
Monocacy River	18	81	66	73	8	7	2	0	0	2	24	0	0	24
Little Monocacy River	6	6	5	6	13	7	3	0	0	3	1	0	0	1
Potomac River	81	92	84	170	73	14	8	0	0	8	12	0	0	12
Little Falls	62	652	612	527	21	34	23	0	0	23	0	0	0	0
Rock Run	18	25	238	51	15	23	4	0	0	4	3	0	0	3
Cabin John Creek	808	571	360	456	32	149	17	0	0	17	101	22	0	123
Muddy Branch	2,088	603	1,122	1,117	19	129	4	0	0	4	35	0	0	35
Rock Creek	1,892	1,316	1,979	834	22	65	6	0	0	6	34	0	49	83
Seneca Creek	1,326	3,884	2,566	3,130	1,207	1,102	54	15	0	69	67	302	0	369
Anacostia River	670	2,089	2,260	956	27	293	5	0	0	5	8	0	0	8
Watts Branch	<u>820</u>	<u>797</u>	<u>665</u>	<u>271</u>	<u>147</u>	<u>36</u>	<u>10</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>50</u>	<u>0</u>	<u>0</u>	<u>50</u>
Total County	8,178	10,554	10,605	7,791	1,629	1,903	144	15	0	159	349	324	49	722

SOURCE: Compiled by Staff of the Montgomery County Planning Board from data of the Department of Environmental Protection, Montgomery County; Department of Licenses and Inspections, Cities of Rockville and Gaithersburg.

TABLE S-8

SUBDIVISION ACTIVITY BY FORECAST AND PLANNING AREAS IN MONTGOMERY COUNTY  
FOR CALENDAR YEARS 1971-1975 AND FOR JANUARY-JUNE, 1975-1976

Forecast Area and Planning Area	1971	1972	1973	1974	1975	January-June, 1975				January-June, 1976			
	Total D.U.'s	Total D.U.'s	Total D.U.'s	Total D.U.'s	Total D.U.'s	1 & 2 Family	Town- house	Apart- ments	Total	1 & 2 Family	Town- house	Apart- ments	Total
<u>Urban Ring</u>	<u>2,334</u>	<u>1,791</u>	<u>386</u>	<u>162</u>	<u>286</u>	<u>85</u>	<u>25</u>	<u>142</u>	<u>252</u>	<u>57</u>	<u>0</u>	<u>0</u>	<u>57</u>
PA 26 Rockville	16	49	1	0	1	0	0	0	0	1	0	0	1
27 Aspen Hill	1,044	1,349	368	147	172	2	25	142	169	0	0	0	0
30 N. Bethesda	54	1	1	2	1	1	0	0	1	3	0	0	3
31 Wheaton	0	125	16	6	0	0	0	0	0	0	0	0	0
32 Kemp Mill	0	0	0	0	10	0	0	0	0	0	0	0	0
35 Bethesda	1,220	267	0	4	97	82	0	0	82	53	0	0	53
36 Silver Spring	0	0	0	3	5	0	0	0	0	0	0	0	0
37 Takoma Park	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>I-270 Corridor</u>	<u>4,601</u>	<u>4,107</u>	<u>1,281</u>	<u>30</u>	<u>613</u>	<u>25</u>	<u>386</u>	<u>0</u>	<u>411</u>	<u>105</u>	<u>142</u>	<u>0</u>	<u>247</u>
PA 13 Clarksburg	70	2,204	8	29	33	25	0	0	25	0	0	0	0
19 Germantown	234	1,182	1,094	0	6	0	0	0	0	0	0	0	0
20&21 Gaithersburg	4,297	721	679	1	574	0	386	0	386	105	142	0	247
<u>Colesville</u>	<u>1,563</u>	<u>42</u>	<u>1,251</u>	<u>4</u>	<u>40</u>	<u>27</u>	<u>0</u>	<u>0</u>	<u>27</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>1</u>
PA 28 Cloverly	215	0	119	4	4	4	0	0	4	1	0	0	1
33 White Oak	44	6	1,131	0	1	1	0	0	1	0	0	0	0
34 Fairland	1,304	36	1	0	1	0	0	0	0	0	0	0	0
15 Patuxent	0	0	0	0	34	22	0	0	22	0	0	0	0
<u>Potomac</u>	<u>869</u>	<u>596</u>	<u>808</u>	<u>67</u>	<u>516</u>	<u>202</u>	<u>0</u>	<u>0</u>	<u>202</u>	<u>70</u>	<u>0</u>	<u>0</u>	<u>70</u>
PA 25 Travilah	232	313	30	41	57	6	0	0	6	18	0	0	18
29 Potomac	637	283	778	26	459	196	0	0	196	52	0	0	52
<u>Olney</u>	<u>590</u>	<u>342</u>	<u>43</u>	<u>37</u>	<u>149</u>	<u>47</u>	<u>0</u>	<u>0</u>	<u>47</u>	<u>3</u>	<u>0</u>	<u>0</u>	<u>3</u>
PA 22 Rock Creek	34	165	8	31	31	0	0	0	0	1	0	0	1
23 Olney	556	177	35	6	118	47	0	0	47	2	0	0	2
<u>Damascus</u>	<u>175</u>	<u>93</u>	<u>137</u>	<u>25</u>	<u>203</u>	<u>161</u>	<u>0</u>	<u>0</u>	<u>161</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>4</u>
PA 10 Bennett	7	7	5	2	0	0	0	0	0	0	0	0	0
11 Damascus	51	77	113	9	44	28	0	0	28	0	0	0	0
14 Goshen	113	0	2	1	159	133	0	0	133	4	0	0	4
15 Patuxent	4	9	17	13	0	0	0	0	0	0	0	0	0
<u>Poolesville</u>	<u>346</u>	<u>662</u>	<u>137</u>	<u>149</u>	<u>309</u>	<u>287</u>	<u>1</u>	<u>0</u>	<u>288</u>	<u>9</u>	<u>0</u>	<u>0</u>	<u>9</u>
PA 12 Dickerson	1	2	24	4	0	0	0	0	0	0	0	0	0
16 Martinsburg	0	0	0	0	1	1	0	0	1	0	0	0	0
17 Poolesville	112	305	54	106	80	79	1	0	80	0	0	0	0
18 Lower Seneca	0	0	0	0	30	30	0	0	30	0	0	0	0
24 Darnestown	233	355	59	39	198	177	0	0	177	9	0	0	9
<b>Total County</b>	<b>10,478</b>	<b>7,633</b>	<b>4,543</b>	<b>474</b>	<b>2,116</b>	<b>834</b>	<b>412</b>	<b>142</b>	<b>1,388</b>	<b>249</b>	<b>142</b>	<b>0</b>	<b>391</b>

SOURCE: Data obtained from the Record Plat File of M-NCPPC.

TABLE S-9

SUBDIVISION ACTIVITY BY MAJOR DRAINAGE BASINS IN MONTGOMERY COUNTY  
FOR CALENDAR YEARS 1971-1975 AND FOR JANUARY-JUNE, 1975-1976

<u>Major Drainage Basin</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>January-June, 1975</u>				<u>January-June, 1976</u>			
	<u>Total</u> <u>D.U.'s</u>	<u>Total</u> <u>D.U.'s</u>	<u>Total</u> <u>D.U.'s</u>	<u>Total</u> <u>D.U.'s</u>	<u>Total</u> <u>D.U.'s</u>	<u>1 &amp; 2</u> <u>Family</u>	<u>Town-</u> <u>house</u>	<u>Apart-</u> <u>ments</u>	<u>Total</u>	<u>1 &amp; 2</u> <u>Family</u>	<u>Town-</u> <u>house</u>	<u>Apart-</u> <u>ments</u>	<u>Total</u>
Patuxent River	466	160	52	19	177	82	0	0	82	3	0	0	3
Monocacy River	11	11	5	3	0	0	0	0	0	0	0	0	0
Little Monocacy River	1	6	23	2	0	0	0	0	0	0	0	0	0
Potomac River	182	312	64	0	82	34	0	0	34	0	0	0	0
Little Falls	0	32	5	0	0	0	0	0	0	1	0	0	1
Rock Run	117	55	5	14	0	0	0	0	0	1	0	0	1
Cabin John Creek	217	297	692	6	431	241	0	0	241	104	0	0	104
Muddy Branch	634	610	83	39	52	36	0	0	36	17	0	0	17
Rock Creek	1,572	516	48	31	217	19	25	142	186	3	0	0	3
Seneca Creek	4,559	4,187	1,850	147	992	377	387	0	764	111	142	0	253
Anacostia River	2,331	1,442	1,613	160	19	2	0	0	2	3	0	0	3
Watts Branch	388	5	103	53	146	43	0	0	43	6	0	0	6
Total County	10,478	7,633	4,543	474	2,116	834	412	142	1,388	249	142	0	391

SOURCE: Data obtained from the Record Plat File of M-NCPPC.

TABLE S-10

OUTSTANDING RESIDENTIAL SEWER COMMITMENTS  
BY PLANNING AREAS  
MONTGOMERY COUNTY, JUNE 1976  
(Dwelling Units)

Forecast and Planning Area	S.F. & T.H.	Apart- ment	% of County	Total	% of Total County
<u>Urban Ring</u>	<u>912</u>	<u>632</u>	<u>8.3</u>	<u>1,544</u>	<u>9.8</u>
PA 26 Rockville	66	0	-	66	.4
27 Aspen Hill*	225	147	1.9	372	2.4
30 No. Bethesda	308	0	-	308	1.9
31 Wheaton	30	0	-	30	.2
32 Kemp Mill	15	0	-	15	.1
35 Bethesda	251	485	6.4	736	4.7
36 Silver Spring	13	0	-	13	.1
38 Takoma Park	4	0	-	4	-
<u>I-270 Corridor</u>	<u>6,016</u>	<u>4,844</u>	<u>64.0</u>	<u>10,860</u>	<u>68.9</u>
PA 13 Clarksburg	0	0	-	0	-
19 Germantown	1,749	2,664	35.2	4,413	28.0
20&21 Gaithersburg	4,267	2,180	28.8	6,447	40.9
<u>Colesville</u>	<u>168</u>	<u>1,424</u>	<u>18.8</u>	<u>1,592</u>	<u>10.1</u>
PA 28 Cloverly	121	0	-	121	.7
33 White Oak	23	650	8.6	673	4.3
34 Fairland	24	774	10.2	798	5.1
<u>Potomac</u>	<u>911</u>	<u>670</u>	<u>8.9</u>	<u>1,581</u>	<u>10.0</u>
PA 25 Travilah	264	0	-	264	1.6
29 Potomac	647	670	8.9	1,317	8.4
<u>Olney</u>	<u>43</u>	<u>0</u>	<u>-</u>	<u>43</u>	<u>.3</u>
PA 22 Rock Creek	11	0	-	11	.1
23 Olney	32	0	-	32	.2
<u>Poolesville</u>	<u>146</u>	<u>0</u>	<u>-</u>	<u>146</u>	<u>.9</u>
PA 24 Darnestown	146	0	-	146	.9
Total County	8,196	7,570	100.0	15,766	100.0

\* Aspen Hill does not reflect the new 1 mgd. treatment facility for  
Rossmoor retirement community now under construction.

SOURCE: Washington Suburban Sanitary Commission Flow Prediction Master File

TABLE S-12

MONTGOMERY COUNTY AT-PLACE EMPLOYMENT  
BY PLANNING AREA

Forecast and Planning Area	Estimated 1976	Percent of Total	Projection 1986	Percent of Total	Estimated Change 1976-1986
<u>Urban Ring</u>	<u>188,660</u>	<u>74.44</u>	<u>243,900</u>	<u>73.13</u>	<u>55,240</u>
PA 26	21,450	8.46	30,000	8.99	8,550
27	7,650	3.02	9,500	2.85	1,850
30	31,010	12.24	48,000	14.39	16,990
31	21,880	8.63	28,600	8.58	6,720
32	4,000	1.58	6,600	1.98	2,600
35	68,630	27.07	77,700	23.30	9,070
36	29,120	11.50	37,700	11.30	8,580
37	4,920	1.94	5,800	1.74	880
<u>I-270 Corridor</u>	<u>34,550</u>	<u>13.63</u>	<u>52,100</u>	<u>15.62</u>	<u>17,550</u>
PA 13	660	.26	1,300	.39	640
19	4,230	1.67	9,000	2.70	4,770
20&21	29,660	11.70	41,800	12.53	12,140
<u>Colesville</u>	<u>12,880</u>	<u>5.08</u>	<u>16,000</u>	<u>4.80</u>	<u>3,120</u>
PA 28	1,070	.42	1,200	.36	130
33	8,770	3.46	9,800	2.94	1,030
34	3,040	1.20	5,000	1.50	1,960
<u>Potomac</u>	<u>9,300</u>	<u>3.67</u>	<u>11,000</u>	<u>3.30</u>	<u>1,700</u>
PA 25	1,160	.46	1,200	.36	40
29	8,140	3.21	9,800	2.94	1,660
<u>Olney</u>	<u>5,070</u>	<u>2.00</u>	<u>6,500</u>	<u>1.95</u>	<u>1,430</u>
PA 22	2,360	.93	3,300	.99	940
23	2,710	1.07	3,200	.96	490
<u>Damascus</u>	<u>1,900</u>	<u>.74</u>	<u>2,300</u>	<u>.69</u>	<u>400</u>
PA 10	80	.03	100	.03	20
11	940	.37	1,000	.30	60
14	300	.12	500	.15	200
15	580	.22	700	.21	120
<u>Poolesville</u>	<u>1,140</u>	<u>.44</u>	<u>1,700</u>	<u>.51</u>	<u>560</u>
PA 12	380	.15	500	.15	120
16	80	.03	100	.03	20
17	400	.16	700	.21	300
18	180	.07	200	.06	20
24	100	.03	200	.06	100
County Total	253,500	100.00	333,500	100.00	80,000

SOURCE: MCPB; the 1976 estimate is subject to revision by an on-going  
at-place employment study.

TABLE S-11

## ACTUAL NUMBER OF DWELLING UNITS CONSTRUCTED ON SEPTIC SYSTEMS

Planning Area	'60	'61	'62	'63	'64	'65	'66	'67	'68	'69	'70	'71	'72	'73	'74	'75	Total
<u>Urban Ring</u>	<u>32</u>	<u>53</u>	<u>53</u>	<u>33</u>	<u>28</u>	<u>25</u>	<u>18</u>	<u>15</u>	<u>8</u>	<u>5</u>	<u>5</u>	<u>5</u>	<u>3</u>	<u>6</u>	<u>3</u>	<u>1</u>	<u>293</u>
26 Rockville	1	8	6	7	6	6	1	1	1	1	0	1	1	1	0	0	41
27 Aspen Hill	4	13	23	17	15	16	11	13	3	2	3	4	2	5	3	0	134
30 N. Bethesda	5	4	2	0	1	1	1	1	1	0	0	0	0	0	0	0	16
31 Wheaton	7	8	4	4	3	0	2	0	1	0	0	0	0	0	0	0	29
32 Kemp Mill	0	8	2	1	0	0	0	0	0	0	0	0	0	0	0	0	11
35 Bethesda	14	9	9	4	3	2	2	0	1	2	2	0	0	0	0	0	48
36 Silver Spring	1	3	7	0	0	0	1	0	1	0	0	0	0	0	0	1	14
37 Takoma Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<u>I-270 Corridor</u>	<u>32</u>	<u>90</u>	<u>69</u>	<u>73</u>	<u>108</u>	<u>120</u>	<u>90</u>	<u>59</u>	<u>40</u>	<u>25</u>	<u>21</u>	<u>48</u>	<u>56</u>	<u>23</u>	<u>14</u>	<u>9</u>	<u>877</u>
13 Clarksburg	5	24	17	32	43	66	44	18	12	14	5	37	41	13	9	2	382
19 Germantown	11	30	19	18	30	18	18	15	14	4	3	6	7	3	1	7	204
20&21 Gaithersburg	16	36	33	23	35	36	28	26	14	7	13	5	8	7	4	0	291
<u>Colesville</u>	<u>65</u>	<u>181</u>	<u>162</u>	<u>144</u>	<u>114</u>	<u>97</u>	<u>44</u>	<u>41</u>	<u>35</u>	<u>20</u>	<u>16</u>	<u>23</u>	<u>11</u>	<u>23</u>	<u>9</u>	<u>2</u>	<u>987</u>
28 Cloverly	20	41	60	84	72	61	36	32	27	15	12	20	8	16	7	1	512
33 White Oak	29	82	48	16	9	7	3	2	1	0	2	0	0	2	1	0	202
34 Fairland	16	58	54	44	33	29	5	7	7	5	2	3	3	5	1	1	273
<u>Potomac</u>	<u>63</u>	<u>134</u>	<u>114</u>	<u>79</u>	<u>109</u>	<u>85</u>	<u>66</u>	<u>60</u>	<u>51</u>	<u>46</u>	<u>34</u>	<u>36</u>	<u>60</u>	<u>60</u>	<u>54</u>	<u>17</u>	<u>1,068</u>
25 Travilah	25	36	41	28	49	25	33	30	16	23	10	17	36	26	26	9	430
29 Potomac	38	98	73	51	60	60	33	30	35	23	24	19	24	34	28	8	638
<u>Olney</u>	<u>54</u>	<u>75</u>	<u>57</u>	<u>44</u>	<u>58</u>	<u>51</u>	<u>32</u>	<u>31</u>	<u>29</u>	<u>19</u>	<u>29</u>	<u>42</u>	<u>36</u>	<u>31</u>	<u>25</u>	<u>6</u>	<u>619</u>
22 Rock Creek	18	39	20	16	26	13	5	7	10	3	4	10	13	6	7	0	197
23 Olney	36	36	37	28	32	38	27	24	19	16	25	32	23	25	18	6	422
<u>Damascus</u>	<u>40</u>	<u>114</u>	<u>129</u>	<u>149</u>	<u>159</u>	<u>181</u>	<u>121</u>	<u>181</u>	<u>88</u>	<u>149</u>	<u>99</u>	<u>189</u>	<u>200</u>	<u>233</u>	<u>109</u>	<u>42</u>	<u>2,183</u>
10 Bennett	7	23	15	16	28	36	32	62	22	24	30	42	51	40	15	9	452
11 Damascus	15	18	22	35	43	40	26	27	17	74	23	70	67	94	18	15	604
14 Goshen	5	36	53	52	45	58	40	52	34	18	19	52	54	66	38	11	633
15 Patuxent	13	37	39	46	43	47	23	40	15	33	27	25	28	33	38	7	494
<u>Poolesville</u>	<u>35</u>	<u>61</u>	<u>85</u>	<u>83</u>	<u>96</u>	<u>95</u>	<u>66</u>	<u>69</u>	<u>65</u>	<u>60</u>	<u>58</u>	<u>53</u>	<u>61</u>	<u>63</u>	<u>39</u>	<u>8</u>	<u>997</u>
12 Dickerson	8	7	12	9	12	13	8	13	14	8	9	4	5	7	9	0	138
16 Martinsburg	1	7	0	2	5	1	3	3	2	2	4	0	1	2	1	1	35
17 Poolesville	9	14	16	10	13	18	8	11	3	7	5	7	3	14	5	1	144
18 Lower Seneca	6	20	28	8	14	22	11	7	7	10	14	14	6	7	4	0	178
24 Darnestown	11	13	29	54	52	41	36	35	39	33	26	28	46	33	20	6	502
Total County	321	708	669	605	672	654	437	456	316	324	262	396	427	439	253	85	7,024

SOURCE: Compiled by Staff of Montgomery County Planning Board from data of the Dept. of Environmental Protection,  
Montgomery County



TABLE S-13

## RESIDENT WORKING FORCE OF MONTGOMERY COUNTY BY PLANNING AREA

Planning Area	1976			1981			1986		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Urban Ring	112,510	74,940	187,450	111,950	74,230	186,180	117,790	78,500	196,290
PA 26	13,620	8,860	22,480	13,810	8,970	22,780	15,440	10,130	25,570
27	12,830	8,340	21,170	14,350	9,430	23,780	13,870	9,150	23,020
30	9,160	6,100	15,260	9,220	6,140	15,360	10,770	7,250	18,020
31	23,750	15,550	39,300	23,340	15,330	38,670	22,870	15,080	37,950
32	9,750	6,460	16,210	8,980	5,920	14,900	9,770	6,460	16,230
35	26,000	17,500	43,500	25,730	17,170	42,900	26,680	17,790	44,470
36	9,710	6,830	16,540	8,920	6,140	15,060	10,960	7,630	18,590
37	7,690	5,300	12,990	7,600	5,130	12,730	7,430	5,010	12,440
I-270 Corridor	17,840	11,910	29,750	25,610	16,830	42,440	31,480	20,690	52,170
PA 13	590	360	950	820	500	1,320	1,090	680	1,770
19	1,770	1,110	2,880	5,240	3,370	8,610	8,290	5,360	13,650
20&21	15,480	10,440	25,920	19,550	12,960	32,510	22,100	14,650	36,750
Colesville	13,220	8,810	22,030	13,110	8,670	21,780	14,450	9,640	24,090
PA 28	2,800	1,760	4,560	3,000	1,890	4,890	3,020	1,920	4,940
33	7,920	5,450	13,370	7,460	5,090	12,550	7,880	5,390	13,270
34	2,500	1,600	4,100	2,650	1,690	4,340	3,550	2,330	5,880
Potomac	11,850	7,560	19,410	13,240	8,480	21,720	14,840	9,530	24,370
PA 25	2,080	1,280	3,360	2,620	1,620	4,240	3,540	2,220	5,760
29	9,770	6,280	16,050	10,620	6,860	17,480	11,300	7,310	18,610
Olney	6,710	4,240	10,950	7,950	5,040	12,990	10,080	6,410	16,490
PA 22	1,270	810	2,080	1,510	960	2,470	1,840	1,170	3,010
23	5,440	3,430	8,870	6,440	4,080	10,520	8,240	5,240	13,480
Damascus Forecast									
Area (PA 10,11,14,15)	4,020	2,540	6,560	4,900	3,100	8,000	5,550	3,510	9,060
Poolesville Forecast									
Area (PA 12,16,17,18,24)	2,680	1,670	4,350	3,240	2,020	5,260	3,890	2,440	6,330
Total County	168,830	111,670	280,500	180,000	118,370	298,370	198,080	130,720	328,800
SOURCE: MCPB Demographic Model (Assumes constant age, sex participation rates - Projected increase in local female participation rate currently unavailable)									

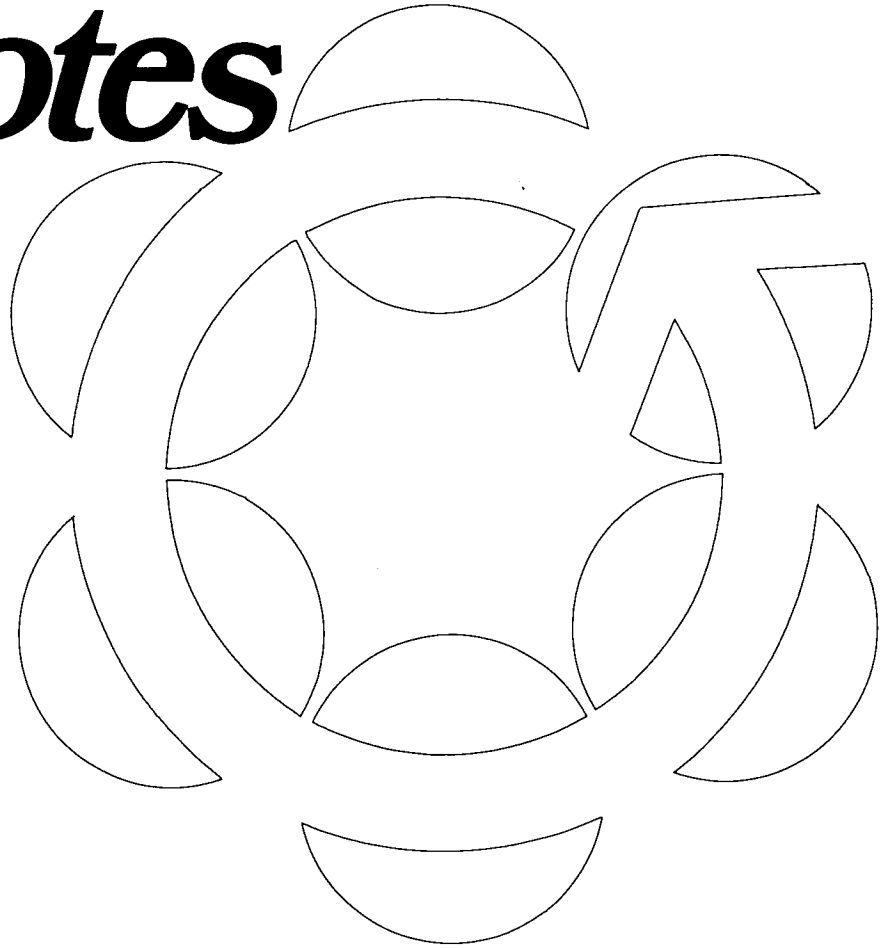
TABLE S-14

FORECAST CHANGES IN SCHOOL-AGE CHILDREN BY PLANNING AREAS  
1976-1981 AND 1981-1986

Forecast Areas and Planning Areas	Change 1976-1981				Change 1981-1986				Net Change 1976-1986			
	Elemen- tary	Jr. Hi.	Sr. Hi.	Total	Elemen- tary	Jr. Hi.	Sr. Hi.	Total	Elemen- tary	Jr. Hi.	Sr. Hi.	Total
<u>Urban Ring</u>	-5,260	-3,730	-2,460	-11,450	720	140	-1,810	-1,230	-4,540	-3,870	-4,270	-12,680
PA 26 Rockville	-1,050	610	210	1,870	80	10	220	130	970	600	430	2,000
27 Aspen Hill	960	650	70	1,680	750	370	570	-1,690	-1,710	-1,020	640	3,370
30 N. Bethesda	320	380	350	1,050	610	190	90	710	290	190	440	340
31 Wheaton	-1,500	-1,010	610	3,120	530	300	670	-1,500	-2,030	-1,310	-1,280	-4,620
32 Kemp Mill	830	540	250	1,620	190	10	220	20	640	530	470	1,640
35 Bethesda	570	750	780	2,100	800	230	340	690	230	520	-1,120	1,410
36 Silver Spring	180	80	140	240	550	110	250	910	370	190	110	670
37 Takoma Park	150	130	50	230	230	20	50	200	80	110	--	30
<u>I-270 Corridor</u>	3,130	1,340	1,290	5,760	1,510	990	1,000	3,500	4,640	2,330	2,290	9,260
PA 13 Clarksburg	50	10	10	70	140	50	30	220	190	60	40	290
19 Germantown	1,560	590	460	2,610	1,340	570	500	2,410	2,900	1,160	960	5,020
20&21 Gaithersburg	1,520	740	820	3,080	30	370	470	870	1,550	1,110	1,290	3,950
<u>Colesville</u>	-1,120	640	640	-2,400	550	20	250	280	570	660	890	-2,120
PA 28 Cloverly	10	90	30	110	40	10	70	100	30	80	100	210
33 White Oak	920	450	550	1,920	250	100	200	50	670	550	750	1,970
34 Fairland	210	100	60	370	340	70	20	430	130	30	40	60
<u>Olney</u>	270	100	200	570	710	330	230	1,270	980	430	430	1,840
PA 22 Rock Creek	30	--	20	50	110	50	20	180	140	50	40	230
23 Olney	240	100	180	520	600	280	210	1,090	840	380	390	1,610
<u>Potomac</u>	960	820	50	1,830	510	60	410	160	450	760	460	1,670
PA 25 Travilah	200	60	30	290	440	180	120	740	640	240	150	1,030
29 Potomac	-1,160	880	80	2,120	70	120	530	580	-1,090	-1,000	610	2,700
<u>Damascus Forecast Area</u>	150	10	50	210	230	90	10	330	380	100	60	540
<u>Poolesville Forecast Area</u>	260	70	90	420	280	140	100	520	340	210	190	940
<b>Total County</b>	-3,530	-3,670	-1,520	-8,720	4,510	1,450	-1,130	4,830	780	-2,220	-2,650	-3,890

SOURCE: Demographic Model, Montgomery County Planning Board

*notes*



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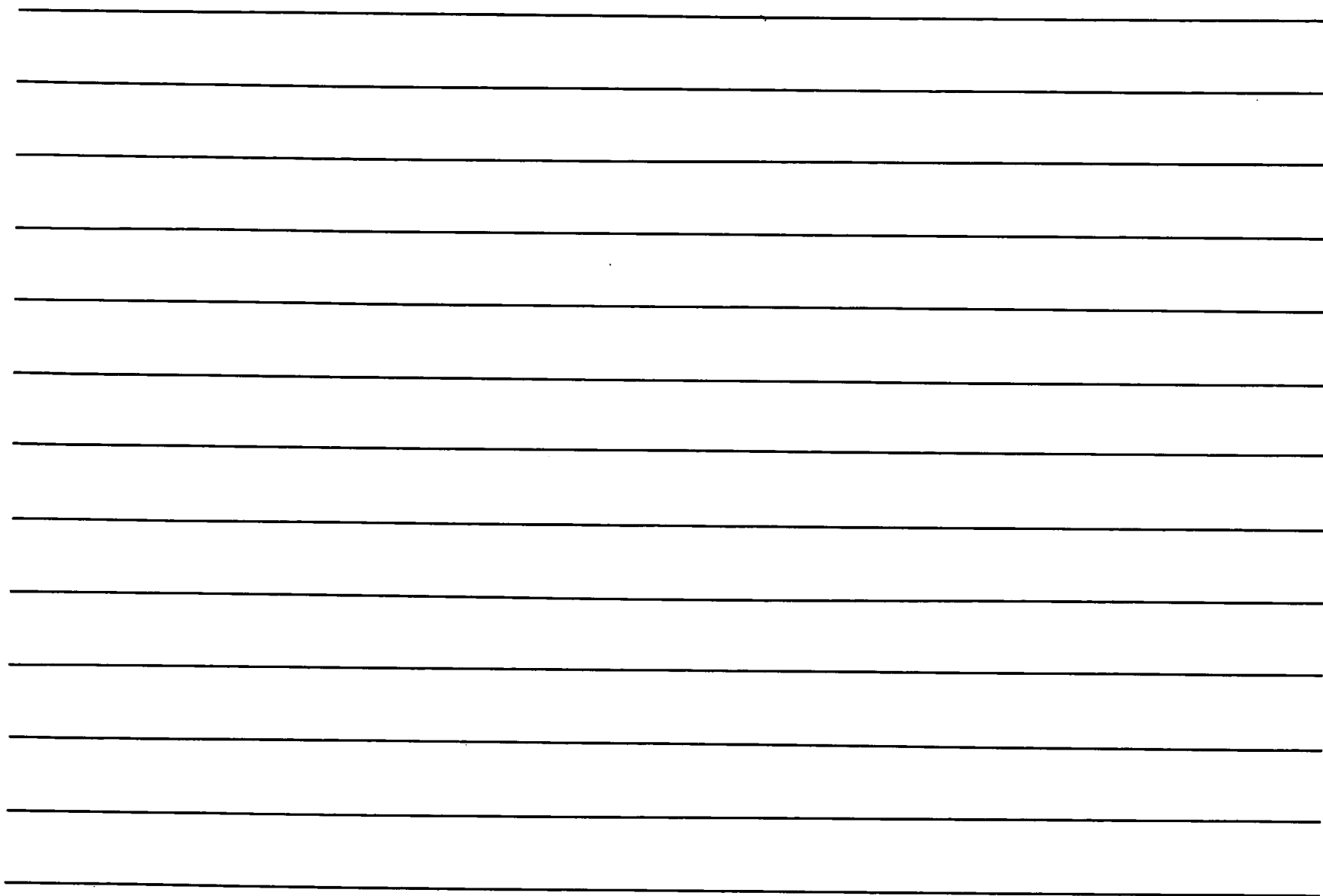
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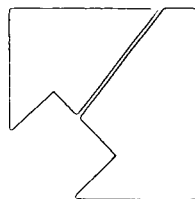
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